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# MMJ

January 1988

# Maryland Medical Journal

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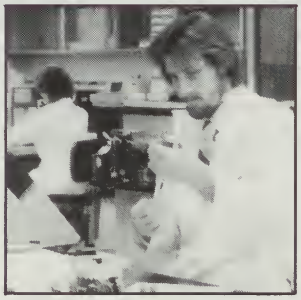
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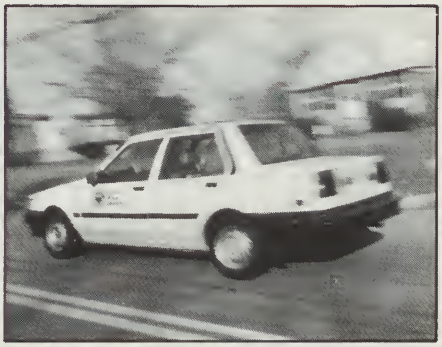
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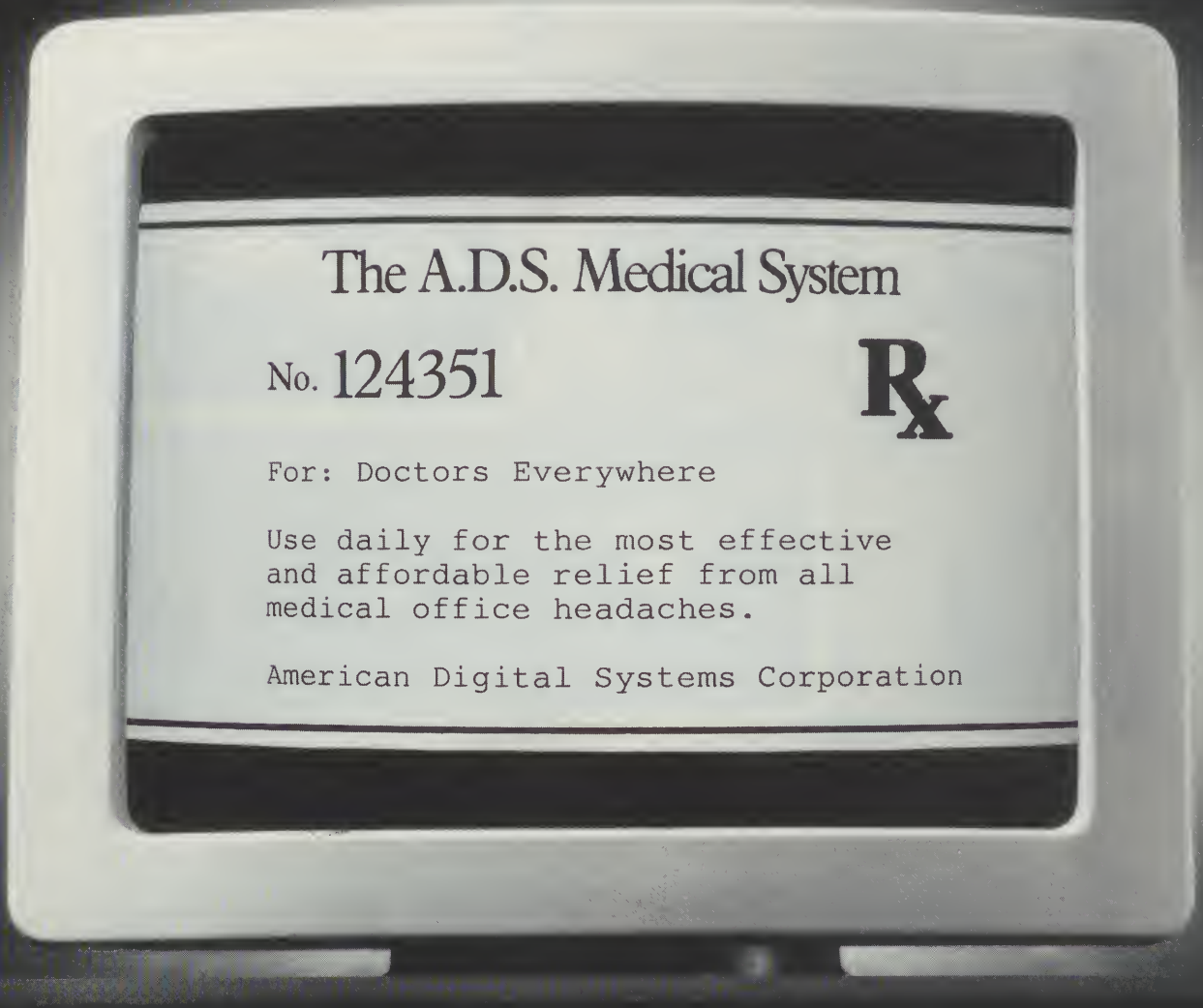
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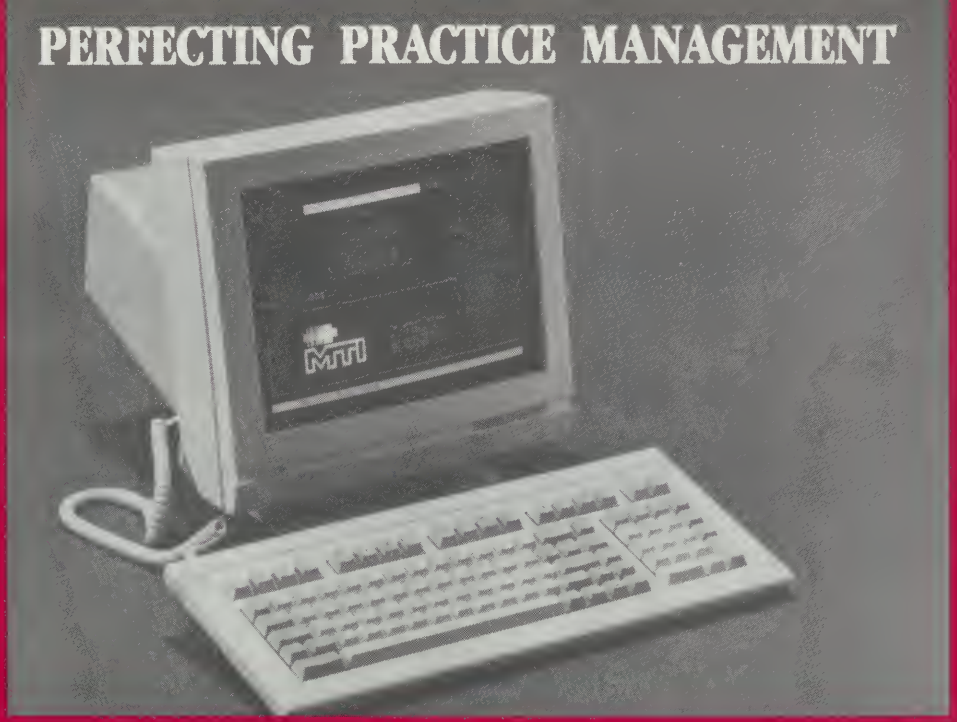
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*Cover:* center—Maryland's Governor William Donald Schaefer. Clockwise from upper right—Thomas V. Mike Miller, Jr., President of the Maryland Senate; R. Clayton Mitchell, Jr., Speaker of the House of Delegates; Melvin A. Steinberg, Lt. Governor of the State of Maryland; and Leon E. Kassel MD, President of Med-Chi. Drawing by Michael Hill.

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PREVENTIVE MEDICINE ADMINISTRATION
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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January 1988

# TUBERCULOSIS UPDATE

Less than two years ago a task force composed of members of state and local health departments., clinicians and pulmonologists met periodically to develop guidelines for the control and containment of tuberculosis in Maryland. These guidelines were published in the May 1986 Maryland Medical Journal (MMJ). Because of the increasing impact of AIDS on the control and treatment of tuberculosis, the task force met again this year to address these clinical challenges.

The changes in the guidelines which follow incorporate the current recommendations of the Centers for Disease Control (CDC) and the American Thoracic Society (ATS). These are the minimal recommendations for the State of Maryland. There are ample data to indicate that the regimens are safe, effective, cost efficient and improve patient compliance. Although these guidelines are designed primarily for local heath departments, they will provide useful information for practicing clinicians.

HIV infection results in immunosuppression with an increase in mycobacterial diseases. Although M. avium is the mycobacterial species most common in AIDS patients, the incidence of M. tuberculosis is also increasing. This is found particularly in those groups in which tuberculosis is prevalent. Since tuberculosis is one of the few transmissible respiratory diseases found in HIV-infected patients, it should be diligently looked for and aggressively treated. HIV-related M. tuberculosis infections respond well to routine anti-tuberculosis drugs, but a lengthened treatment regimen is necessary.

All patients with tuberculosis should be offered HIV antibody testing and counselling. Any patient at high risk for HIV infection who may decline serologic testing, should be considered HIV positive when ordering tuberculosis therapy. This will ensure an efficacious regimen.

All AFB smear positive or undifferentiated culture positive HIV-infected patients should be considered to have active tuberculosis infection. Appropriate anti-tuberculosis therapy, with supervision, should be instituted immediately. If the final culture turns out to be an atypical mycobacterial organism, then therapy will need to be adjusted or terminated.

There are no changes in the previous recommendations for sputum analysis, x-ray examinations or monitoring for side effects of medications. These requirements continue to be important components of tuberculosis treatment and control.

**Preventive Therapy**

Since preventive therapy acts by reducing the bacterial population in "healed" or roentgenographically invisible lesions of the person taking the drug, it is in reality treatment of infection and can prevent the infection from progressing to tuberculosis. This concept is extremely important in preventive therapy regimens for patients with HIV infections.

Current recommendations for preventive therapy for HIV infection or suspected high risk patients have special treatment requirements because of the associated immunosuppression. It is recommended that the duration of the INH regimen be increased to a minimum of 12 months. Only through effective chemoprophylaxis can active tuberculosis disease be prevented.

A tuberculin skin test should be administered to all HIV-infected patients; however, the absence of a significant reaction does not rule out the diagnosis of tuberculosis because immunosuppression associated with HIV infection may cause negative results. Tuberculosis skin testing guidelines changes include the recommendation that any person with a significant tuberculin reaction who is at risk of HIV infection be offered serological testing and counselling. This permits the physician to prescribe an appropriate treatmemt regimen.

All other components of the Department of Health and Mental Hygiene Guidelines for Tuberculosis Control published in May 1986 remain unchanged. For a copy of the complete guideines, please contact the Epidemiology and Disease Control Program, Mrs. Jeannette Gray Rose, (301) 225-6698.

## Treatmemt of Tuberculosis

Recommended regimen in adults (see special considerations below).

Strictly supervised chemotherapy with:

| | |
|---|---|
| Isoniazid (INH) | 300 mg p.o. daily |
| and | |
| Rifampin (RMP) | 10-20 mg/kg up to 600 mg p.o daily |
| and | |
| Pyrazinamide (PZA) | 15-30 mg/kg up to 2 mg p.o. daily |

These three drugs shuld be given for eight weeks; this "induction" phase is then followed by four months of supervised therapy with:

| Twice Weekly | or | Daily |
|---|---|---|
| INH - 15 mg/kg p.o. (for individuals weighing >120 percent of ideal weight, use ideal body estimates to calculate dosage.) | | INH - 10 mg/kg up to 300 mg p.o. |
| and | | and |
| RMP - 20 mg/kg up to 600 mg p.o. | | RMP - 600 mg p.o. |

A major change is the deletion of streptomycin in the "induction" phase. Uncomplicated tuberculosis disease may be treated without using streptomycin provided the patient receives INH, RMP and PZA. For those patients suspected of having drug resistant mycobacteria, the addition of streptomycin is indicated.

**Six month treatment regimens are not appropriate for persons with HIV infection.**

## Tuberculosis in HIV infected Patients

For patients with HIV infection and tuberculosis, at least nine months and preferably 12 months of chemotherapy are recommended. Therapy should continue at least six months after cultures have become negative.

# PENICILLINASE PRODUCING **N.GONORRHEAE**

The State of Maryland is experiencing a significant increase in the number of reported cases of penicillinase-producing **Neiserria gonorrheae** (PPNG) for 1987. As of December 3, 1987, there were 233 cases reported in Maryland excluding Baltimore City. This compares with 77 cases reported for calendar year 1986 and 78 cases reported for calendar year 1985.

Infections with penicillinase-producing **Neisseria gonorrheae** do not respond to penicillin based treatment regimens. Patients with proven PPNG infection and their sex partners as well as persons with gonorrhea who are likely to have acquired infections in areas where the PPNG prevalence is high and their sex partners should be treated with spectinomycin 2.0 g I.M. OR ceftriaxone 250 mg I.M. This I.M. single dose regimen should be followed by a seven day course of oral tetracycline 500 mg four times daily OR doxycline 100 mg twice daily. For patients in whom tetracyclines are contraindicated or not tolerated, the single dose regimen may be followed by erythromycin base or stearate 500 mg by mouth four times daily for seven days OR erythromycin ethylsuccinate 800 mg by mouth four times daily for seven days.

Teracycline-resistent **N. gonorrheae** is also becoming more prevalent in Maryland. In some areas, up to 15% of isolates are resistant to tetracycline. In recent tests, more than 50% of PPNG isolates tested were also resistent to tetracycline. For this reason, treatment of gonorrheae with tetracycline alone is <u>not</u> recommended in Maryland.

The diagnosis of PPNG infection is based on the detection of beta-lactamase production in culture isolates. PPNG cannot be distinguished from antibiotic suseptible strains clinically nor on gram stain morphology. All specimens sent to Maryland State laboratories are tested for penicillin resistance or beta-lactamase production. Prompt reporting of PPNG infections to the local health department is absolutely essential to ensure rapid epidemiologic follow-up of infected persons and their sexual contacts to prevent spread in the community

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# Members in the News

**James Castellano MD** has been appointed chairman of the Department of Obstetrics and Gynecology at St. Agnes Hospital. Dr. Castellano served as the acting chairman of the Department of Obstetrics and Gynecology since August 1986, while holding the position of director of Gynecological Services to which he was appointed in 1984. Prior to that, he was director of Maternal/Fetal Medicine at St. Agnes.

Dr. Castellano received his bachelor of science degree from the University of Maryland and his medical degree from that University's School of Medicine. From 1960 to 1981, he maintained a private practice.

• • •

**B. Stanley Cohen MD**, president and chief executive officer of Sinai Hospital in Baltimore, has been elected to the Executive Council of the Maryland Hospital Association. Dr. Cohen also will chair MHA's Professional Practices Committee, one of its eight permanent policy panels. The committee, comprised of physicians, nurses, and other representatives of health care professions from across the state, is the Association's chief advisory body on issues such as medical ethics, public health problems, and other clinical subjects.

Dr. Cohen has headed Sinai Hospital since last February. For 20 years he was chief of its department of rehabilitation medicine, developing it into the largest and most comprehensive unit of its kind in a Maryland community hospital. He also developed the Sinai Fitness Center and a hospital-based sheltered workshop to provide training and employment to rehabilitated patients.

Dr. Cohen attended Johns Hopkins University and earned his medical degree from the University of Maryland in 1947. For the next four years he trained at Sinai and the VA Hospital in the Bronx, New York. He was in private practice until he entered the field of physical medicine and rehabilitation in 1963 by serving a residency and fellowship at the Baylor University Medical Center in Texas.

The Maryland Hospital Association is a nonprofit, nongovernment organization formed 20 years ago as a vehicle for cooperation and communication among the state's 65 community acute care and special hospitals.

**Richard L. Gorman MD** has been appointed director of Pediatric Ambulatory Services at St. Agnes Hospital. While assuming this position, Dr. Gorman will continue to serve as the medical director of the Maryland Poison Center, University of Maryland School of Pharmacy. Before coming to St. Agnes, he was director of the Pediatric Emergency Room at the University of Maryland.

Dr. Gorman holds faculty positions as assistant professor of clinical pharmacy at the University of Maryland School of Pharmacy and clinical assistant professor of Pediatrics at the University of Maryland School of Medicine.

He received his bachelor's degree in physics from Catholic University of America and his medical degree from State University of New York at Downstate Brooklyn, NY.

• • •

**Donald R. Lewis MD** has been elected president of the medical staff of Montgomery General Hospital in Olney. A member of the hospital's medical staff since 1962, Dr. Lewis has been in private practice as a family practitioner for 25 years. As medical staff president, he will serve on the hospital's board of directors. He is a past board member and previously served as vice-president of the medical staff.

Dr. Lewis received a premedical degree from the University of Maryland and graduated from the University of Maryland Medical School. Following postgraduate training at St. Agnes Hospital in Baltimore, he served as a medical officer in the US Air Force.

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December 1987, page 1034

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The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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# Library Page

## Selected Medical Literature Searches

The following are among the computerized medical literature searches provided to Med-Chi members during October 1987.

| | | No. of Citations |
|---|---|---|
| 1. | Chronic mononucleosis | 23 |
| 2. | Foreign bodies in the hand | 11 |
| 3. | Job's syndrome | 15 |
| 4. | Infanticide | 39 |
| 5. | Peer review | 29 |
| 6. | Penile necrosis | 16 |
| 7. | Therapeutic use of somatotropin | 44 |
| 8. | Treatment of endobacterial endocarditis | 23 |
| 9. | Treatment of hiccups | 19 |
| 10. | Trichoepithelioma | 14 |

If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library.

*SUSAN E. HARMAN*
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## Membership

Membership is the backbone of any organization, and the Auxiliary to Med-Chi is no exception. We are working visibly on all three levels—national, state, and county—to enhance the image of physicians of Maryland.

Last year Auxiliary President Ching Barretto had a "Member Shopping" campaign. It was so successful that Maryland was allocated two more delegates at the Chicago 1987 House of Delegates.

This year Auxiliary President-Elect and State Membership Chairman Eva Edmonds is "Member Shopping at the Outlets" to increase membership from 1,450 to 2,050 so that we can have a total of eight delegates in June.

Our aim is to have a larger delegation when Mary Strauss (Mrs. Albert J., Jr.) is sworn in as American Medical Auxiliary President—the first from the State of Maryland in the National Auxiliary's 66 year history.

Auxiliary is a federated membership, that is, membership in the county, state, and national auxiliaries. There is strength in numbers when addressing the changing environment in medicine. County and state auxilians are able to attend leadership training programs, and a wealth of program materials and project ideas are available to all members. Ideas and projects on the county level are often the results of national and state meetings.

Physicians have received their bills from Med-Chi, and Auxiliary dues also are listed. It is no longer a question of "Why belong?" With the legislative issues that affect the practice of medicine and with the health issues facing society and the physician's family, one cannot afford *not* to belong to the Auxiliary federation.

*Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Ching Barretto President; Mrs. Nancy H. Howell Editor.*

### Auxiliary Day in Annapolis

A day in Annapolis will be held on Wednesday, January 20, 1988 from 11 a.m. to 3 p.m. This is an opportunity for legislators and auxiliary members to meet each other and become aware of each others' concerns for and involvements in the community in which each lives. Your presence will make a public statement at the state capitol that the medical community is interested in the health issues under legislative consideration.

During this time, you can take a self-guided tour, visit your legislators, lunch at the Senate Reception Room, listen to committee hearings, and meet the leadership.

The price of the lunch is $6 and reservations should be made through Ms. Kathy Krizan at the Auxiliary office. Make your check payable to "Med-Chi Auxiliary" and return the tear-off sheet below.

We look forward to your participation and support for part of or all of the day.

I am interested in attending the Auxiliary Day in Annapolis on Wednesday, January 20, 1988. I have enclosed my check for $6 to cover the luncheon.

_____
**Name**

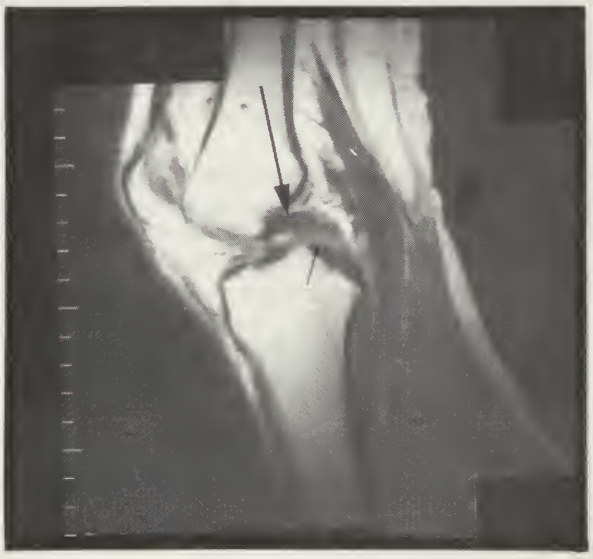
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# MR UPDATE

## MRI Advances the Detection of Musculoskeletal Disease

### KNEE EXAMINATION



**HISTORY:** This 44-year old female recently sustained a knee injury and has clinical evidence of abnormal laxity of the posterior cruciate ligament.

**SCAN:** This parasagittal view near the midline clearly demonstrates avulsion of the posterior cruciate ligament (large arrow). The ligament is normally attached at its femoral origin. Total avulsion of the ligament has occured near its tibial insertion, the expected position of which is marked by the small arrow. The higher intensity (lighter) material at the tip of the small arrow represents hemarthrosis consequent to the recent injury.

**MRI HIGHLIGHTS:** The ligamentous structures of the knee are routinely well demonstrated by surface coil MRI. Surface coil imaging is essential for the special resolution needed in this area. Surface coil MRI is also useful for demonstrating meniscal injuries. Frank meniscal disruption may be seen and confirmed at arthroscopy. Since the articular surfaces, bone detail, and extra-articular structures are also shown by MRI, MRI is highly competitive with contrast arthrography. MR requires no painful injection and no ionizing radiation. MRI is also the procedure of choice for imaging aseptic necrosis of the hip and other musculoskeletal diseases.


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# Executive Director's Newsletter

January 1988

**CONGRESSIONAL MEDICARE UPDATE**

Although statutory language is not yet available for the budget reconciliation package, the following information has been received:

1. There will be a new physician enrollment period during March 1988. Agreements entered into during the new sign-up will be effective for services provided from April 1, 1988 through December 31, 1988.

2. Participation contracts in effect on December 31, 1987 will be extended through March 31, 1988 unless the physician terminated the agreement, in writing, before midnight December 31, 1987. It is not yet clear what the status will be for a physician who was not a participating physician in 1987 but who executed an agreement for 1988 prior to January 1, 1988.

3. There are also several points that should be noted as physicians go into the New Year for services provided starting January 1, 1988:

   a. MAAC limits will apply as the charge limit for each service. Sanctions may be issued for repeated violations. Under previous law, a physician could charge a patient an amount higher than the MAAC as long as the mean or median of all the physician's Medicare charges for that service equaled the MAAC.

   b. Under previous law, a nonassigned clinical lab service provided through a physician's office was a noncovered benefit. When such a service was provided on a nonassigned basis, Medicare simply refused to pay. Now, physicians are prohibited from billing a patient for a nonassigned laboratory service, and failure to comply will place the physician at risk of sanctions including rebates to the patient, civil monetary penalties, and possible exclusion from the program.

**PHYSICIAN IDENTIFICATION NUMBERS**

Med-Chi and the Maryland Health Services Cost Review Commission have instituted a new system to protect physician confidentiality in reports and information issued from the Cost Review Commission. Physicians' unique identifier numbers, issued by Med-Chi and used by hospitals to report discharge information to the Commission, no longer will appear with the information made available to the public by the Commission.

The new system will reduce the chances of pressure being placed on physicians to change the hospitals to which they refer their patients. An opinion issued by Maryland's Attorney General endorsed the new system and stated that the unique identifier numbers may not be used in any way to market hospitals or to induce physicians to change their hospital admitting practices.

As before, individual physician identities will be made available to Hospital Utilization Review Committees, as provided for in Maryland law. The identity must be requested by the physician chairman of the hospital's UR committee on a form provided by Med-Chi. The chairmen and members of hospital UR committees may not disclose a physician's identity outside their committee. Suspected breaches of the confidentiality of physician identity will be reported to the Attorney General's Office.

PHYSICIAN DISCIPLINE REPORT

On December 30, 1987 an article appeared in The Evening Sun entitled "50 Doctors Disciplined for Improprieties." The article was based on a report issued by a Med-Chi Task Force that was developed to address an earlier Evening Sun article (October 7, 1987) citing disciplinary actions taken only by the Commission on Medical Discipline.

The report, developed by a Task Force including members from Med-Chi, the Commission, and the Board of Medical Examiners, represents the total number of disciplinary actions taken during fiscal year 1987 (July 1986 - June 1987) through the combined efforts of all three physician peer review groups.

The Task Force Report was mailed to every component medical society and to every newspaper serving Maryland. To obtain a copy of the report contact Nina Casey or Caroline Harman at the Faculty office.

PRIVATE OFFICE LABORATORIES

Laboratories in private physician offices with four or more physicians are required to be licensed by the State Laboratory Division. Licenses are not required but may be obtained for private office laboratories involving three or less physicians.

All private office laboratories must participate in proficiency testing, and demonstrate satisfactory performance in all non-exempt laboratory tests performed. Questions should be directed to the Laboratory Administration at 225-6100.

HOSPITALS CME ACCREDITATION

The Continuing Medical Education Review Committee, through authority delegated from the Accreditation Council for Continuing Medical Education, surveys institutions requesting authority to sponsor their own CME programs. If your hospital would like to become involved in sponsoring CME programs designated as Category I, please contact: Eugene P. Libre MD, Chairman, CME Review Committee, Med-Chi; 1211 Cathedral Street, Baltimore, MD 21201; 301-539-0872, Extension 325.

**RADON AWARENESS CAMPAIGN**

The Maryland Department of the Environment's Center for Radiological Health staff will be conducting a pilot radon public awareness campaign in Frederick, Maryland this winter. The State has developed educational posters and pamphlets as part of this effort. Any physician in Frederick who has an interest in obtaining posters and pamphlets for their office, should call Patricia Haman at 202-382-5365.

Physicians in other areas of Maryland will be able to receive these materials at a future date.

**MEDICAL PAYMENT SYSTEMS**

Med-Chi, Component Medical Societies, and the AMA have joined together to provide a means of reducing your overhead cost and improving your cash flow without the necessity for capital investment. The equipment needed is provided without charge and is about the size of a telephone console set, and is about as easy to operate. The program is an electronic billing system, Medical Payment Systems (MPS).

With MPS, physicians in other areas of the country have seen significant improvement in their billing efficiency, their cash flow due to more expeditiously transmitted claims and payments, and improved patient relations through ease of claims filing. For the past two months, several Maryland physicians have been testing the systems in their offices, and all report great satisfaction. Consequently, we are ready to offer MPS to all members.

For more information about MPS, contact Joseph Harrison at the Faculty office.

**RESOLUTIONS DEADLINE**

The deadline for submission of resolutions for consideration at the 1988 Annual Meeting of the House of Delegates is FRIDAY, MARCH 4. Resolutions must be sponsored by a Med-Chi member, a component society of the Faculty, the Council, or committees of the Faculty. A resolution introduced by an individual member must have the endorsement of either one-third of the membership of his/her component society or 30 members of his/her component society, whichever is smaller.

**DUES BILLS**

The 1988 dues second notices were mailed the second week of January. In order to qualify for physician's defense panels, dues must be paid by January 31, 1988.

**DUES DEDUCTIBILITY**

Under the Tax Reform Act of 1986, most physicians' membership dues are still deductible either as a business expense or as a miscellaneous itemized deduction. Physicians conducting business through sole proprietorship, partnership, or "Subchapter S" corporation may still deduct dues in their entirety as a business expense. Incorporated physicians or physicians employed by a corporation may still deduct the dues in their entirety as a business expense.

Employed physicians who pay their own dues may deduct the dues only insofar as the dues plus other miscellaneous itemized deductions exceed 2% of Adjusted Gross Income.

**1988 ANNUAL MEETING**

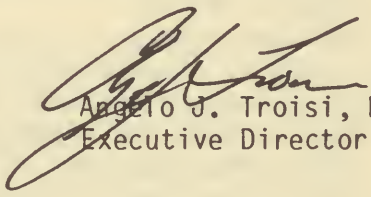
The 1988 Annual Meeting will be held Wednesday-Friday, April 27-29 in Baltimore. The meetings and exhibits will be held at the Baltimore Convention Center, sleeping rooms will be at the Harbor Court Hotel, and the Presidential Banquet will be held on Thursday, April 28 at the Hyatt Regency Hotel. Mark your calendar now.

**MARY MCGIBBON RETIRES**

Mary McGibbon, Director of Conventions and Meetings since 1974, will be retiring after the 1988 Annual Meeting. Patricia Munoz, a member of the Med-Chi staff for many years, has been selected as the new Director. JoAnn Cirillo has been hired to assist Ms. Munoz and to coordinate practice management workshops.

Under Mrs. McGibbon's direction the Annual Meeting scientific exhibits doubled, and in some years, tripled. The practice management workshops and cosponsorship activities became an important part of the services offered by the Faculty. It is anticipated that the Department will continue to grow and to offer increased services to members.

Mrs. McGibbon will remain in the Department until after the 1988 Annual Meeting, however, all calls and correspondence should be directed to Ms. Munoz.



Angelo J. Troisi, F.A.C.H.E.
Executive Director

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## Attention: All Med-Chi members of the Medical Mutual Liability Insurance Society of Maryland

In keeping with the intent and concern of the Med-Chi House of Delegates in its desire to increase representation of the Medical Mutual membership at Med-Mutual's annual meeting in April 1988, we have provided for your convenience a blank Proxy form on the next page that may be detached, signed, and forwarded to:

Med-Chi
1211 Cathedral Street
Baltimore, Maryland 21201
Attention: Proxy

The form should be completed and mailed as soon as possible but no later than March 1, 1988. If you already have completed and submitted your proxy to either your component society or to Med-Chi, please disregard this request.

# PROXY

The undersigned member of the Medical Mutual Liability Insurance Society of Maryland hereby appoints Raymond M. Atkins, MD as agent and proxy of the undersigned, with full power of substitution, to cast all votes which the undersigned would be entitled to vote if personally present at the Annual Meeting of members to be held at the new Medical Mutual offices, 225 International Circle, Hunt Valley, Maryland at 8 P.M. on April 26, 1988, and any adjournment of such meeting, with all power which the undersigned would possess if personally present, upon all matters that may properly come before said meeting or any adjournment thereof.

The undersigned hereby revokes any proxy or proxies heretofore given to cast all votes at said meeting or any adjournment thereof.

_____ _____

Date Member

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# One Minute with Diabetes

## Managing Long-Term Diabetes Millitus

*Doctor, my 64-year-old brother has had insulin-dependent diabetes mellitus for more than 20 years. He has complications of retinopathy for which he received laser therapy and has very limited vision now, nephropathy with poor renal function, neuropathy with disturbed gait, and class IV congestive heart failure. In the nursing home his blood glucose varies from 30mg/dl to over 600mg/dl (blood glucose monitoring done by the nursing home staff). He was admitted to the hospital because of the poorly controlled diabetes and to attempt to improve the congestive heart failure. After 11 days of hospital care he was discharged on:*

*Humulin regular insulin 12 units before breakfast*
*Ultralente insulin 20 units before breakfast*
*Humulin regular insulin 12 units before supper*
*1500 Cal ADA meal plan with 3 to 4 gm sodium*
*Plus nine other oral medications related to the heart failure and other medical problems*

*What more can we do to improve the control of his diabetes?*

This man has all of the common complications of long-standing diabetes mellitus: neuropathy, nephropathy, retinopathy, and cardiovascular disease. It is probable his diabetes was poorly controlled for many years.

At this time he cannot be managed in most home situations, and Medicare and most other carriers will not support prolonged hospital care, so a good nursing home is essential for his chronic care.

The nursing home should have trained personnel 24-hours a day to do bedside blood glucose monitoring. Urine glucose testing in this man is useless because of proteinuria and high threshold for glucose. Blood glucose should be tested before each meal and at bedtime. This may need to be adjusted for the particular nursing home because some facilities feed patients five times daily. If the blood glucose is above 250mg/dl, two units of regular insulin should be given as a supplement for each 50mg/dl above that amount. For example, if the blood glucose were 350mg/dl, four units would be given at that time. If the blood glucose is below 100 mg/dl, an exchange of fruit juice should be given and the blood glucose checked again in an hour.

Because a patient with these problems tends to have gluteal and lower extremity edema with poor subcutaneous absorption, all insulin should be given in the upper extremities. Another important point, such patients tend to eat irregularly. If all the food on his tray is not consumed, the dietary department should calculate the calories and make it up in juices or other carbohydrates. If the meal plan is not eaten consistently, the dietary department and the physician should reevaluate the meal plan and its balance with the insulin being given.

I would concur that if the patient and family agree, no emergency cardiorespiratory measures should be taken. This man's cardiac problems will be the cause of his demise and not the diabetes. With adequate monitoring his blood glucose should be able to be maintained between 150mg/dl and 250mg/dl.

If he had closely supervised his diabetes from the onset 20 or more years ago, he probably would not have as many or as severe complications as he now has. The management of his diabetes is largely a problem of palliation and avoiding the crises of hypoglycemia and ketoacidosis.

Data for this case were submitted by Harold Bob MD.

***De WITT E. De LAWTER* MD**
**Editor**


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## Brief Psychiatric Treatment

*GARY W. NYMAN MD and PAUL RUSKIN MD*

Developments in Biological and Dynamic Psychiatry over the last few decades have made brief psychiatric treatment possible for more patients. Short-term psychodynamic techniques work well with careful selection of both patient and treatment focus. Antidepressants, anxiolytics, and neuroleptics complement treatment when targeting specific psychiatric symptoms. Brief treatment is often useful in a circumscribed disorder of acute onset, like a posttraumatic stress disorder secondary to a serious accident or loss of a loved one. It can help with the control of symptoms that occur intermittently, such as atypical depression and panic disorder. Brevity may vary from a few sessions through a range of 12 to 20 sessions to a limit of 40. A very specific treatment focus is essential to maintain the short treatment duration.

A number of theorists (including Davanloo, Malan, Mann, and Sifneos) have conceptualized brief psychiatric treatment. They all emphasize the importance of a central focus to treatment and modest, realistic goals. They stress careful patient selection, using criteria such as prior and current levels of healthy functioning, a reasonably strong sense of self, and strong motivation for treatment. All four stress the importance of dealing with feelings about the therapist (transference) that emerge in treatment and relating these feelings to the central treatment focus. Beck's cognitive therapy differs in its focus on helping the patient eliminate illogical thinking patterns that can lead to anxiety, depression, and other psychiatric symptoms. The reader is referred to Ursano and Hales* for a more thorough summary of these theorists' works.

Pharmacological intervention can complement and accelerate the psychotherapeutic process. Different categories of medications have proved useful in rapid symptom amelioration. Antidepressants such as desipramine and tranylcypromine have proved their effectiveness in reversing the moderate and severe symptoms of depression. Anxiolytics such as lorazepam and alprazolam have had significant impact in reducing symptoms of anxiety, especially in acute situations with very clear precipitating events. Neuroleptics such as haloperidol are used for rapid sedative and antipsychotic effect in the acutely agitated, psychotic individual. Pharmacologic intervention has become more specifically tailored to diagnoses and symptoms, complementing the treatment effectiveness.

Brief treatment requires the psychiatrist's tolerance of inattention to aspects of the patient's difficulties that do not relate to the treatment focus. The psychiatrist must deal with the patient's anger when important but noncentral issues emerge but are ignored. Persistence with the agreed upon treatment focus is required if the time limitations are to be met.

Brief psychiatric treatment generally is not the treatment of choice for chronic psychiatric disorders, personality disorders, or those who present without a clear treatment focus. In such cases, brief treatment often unnecessarily rushes a process that takes months or years to complete correctly. Unfortunately, some insurance and many health maintenance plans encourage brief treatment even when a longer course of treatment is indicated.

For carefully selected patients, brief treatment is the treatment of choice. By constantly maintaining a central focus and by judiciously combining medication with the psychotherapeutic process, the psychiatrist often can accomplish a great deal in a relatively short period of time.

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AMWA AMERICAN MEDICAL WRITERS ASSOCIATION

* Ursano, R. J. and Hales, R. E. "A Review of Brief Individual Psychotherapies." *Am J Psychiatry* 143:(1986) 1507–17.

*Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.*

## The Thyroid Gland

A mass or a nodule in either lobe of the thyroid gland signifies pathology. While benign colloidal goiter is common in adult women, a thyroid nodule has a higher incidence of being malignant in men. Children and young adults who present with thyroid nodule are considered malignant until proved otherwise. Patients who have irradiation to the face, neck, or mediastinum during infancy or childhood have a 7 percent chance of cancer of the thyroid gland.

A thyroid mass present for years without change in size is probably benign and can be treated by synthroid. Sudden increase in the size of a thyroid nodule may signify malignancy or hemorrhage in the nodule. A solitary thyroid nodule has a 20 percent chance of being malignant, compared with only 5 percent in a multinodular gland. However, there are definite indicators for malignancy of the thyroid gland. These include a hard thyroid mass, the presence of cervical lymph node metastasis, fixation of the thyroid mass to surrounding structures, or the presence of vocal cord paralysis. Most of these are late signs.

The availability of thyroid scanning and ultrasound can help in evaluating thyroid nodules. A **cold nodule** on the scan that is solid by ultrasound and not cystic has 20 to 30 percent chance of being malignant. This is because benign adenoma and fibrosis can give the same picture. On the other hand, cystic lesions have a 2 percent chance of harboring malignancy. This incidence also increases if the ultrasound reveals complex pattern such as a cyst with solid areas. **Hot nodules** by scan usually are due to hyperfunctional benign adenomas and are rarely malignant. Aspiration cytology and needle biopsy of thyroid nodules have not been of great help and are unreliable. There are four types of thyroid cancers:

1. **Papillary adenocarcinoma**, usually mixed type (papillary-follicular), is the most common and constitutes 60 to 80 percent of all thyroid cancer. It usually metastasizes to regional lymph nodes. The tumor is not encapsulated.

2. **Follicular carcinoma** is the second common type with an incidence of 20 percent. This tumor is always encapsulated and metastasizes via the blood to other organs.

These two types are the well-differentiated carcinomas, with the papillary having a better ten-year survival than the follicular. The prognosis depends on the stage of the disease and patient age. Patients who are 40 or younger have better survival than the older group. The overall five- and ten-year survivals are 95 percent and 85 percent, respectively.

The surgical approach to these two types is similar and includes total removal of the affected lobe of the thyroid and the isthmus, and subtotal lobectomy on the opposite side to preserve two of the parathyroid glands. The laryngeal nerves must be visualized and preserved. The reason for performing subtotal thyroidectomy is that over 20 percent of these tumors are multicentric. Any palpable cervical lymph nodes present should be removed or a modified radical neck may be performed. The author personally performs total thyroidectomy, preserving the parathyroid glands and removing the palpable cervical lymph nodes. The patient receives no thyroid therapy for six to seven weeks and then is given a therapeutic dose of 100 mCi of $^{131}I$, followed by maintenance synthroid tablets daily.

Locally invasive tumors (that is, the carcinoma has invaded the thyroid capsule and attached to the surrounding structures) are rare and are treated surgically by removing all gross tumor but preserving the vital structure. The patient is then treated by $^{131}I$ and synthroid. These patients have a poorer prognosis, however, with a ten-year survival of 60 percent. Extensive radical surgery has not proved to improve the survival.

3. **Medullary carcinoma** can be part of multiple endocrine neoplasia syndrome (MEN-2). This lesion has a tendency to be multicentric in the thyroid gland and metastasizes early to regional lymph nodes and by the blood to other organs, mainly lung and liver. Family members have to be investigated to rule out the familial type. Plasma calcitonin level is an excellent marker in establishing the diagnosis and in the follow-up of these patients and their families. As a part of the MEN-2, adrenal medullary hyperplasia or pheochromocytoma may be present; these should be treated first to avoid hypertensive crisis during thyroid surgery.

The surgical treatment of medullary carcinoma is total thyroidectomy with bilateral modified radical neck dissection and mediastinal dissection if the regional lymph nodes are not involved. It is advisable to sample the cervical and the upper mediastinal lymph nodes, even if these appear normal to rule out micrometastases.

If the patient has hyperparathyroidism as part of the MEN-2 syndrome, parathyroidectomy is to be performed in the same setting. The five- and ten-year survival is 57 percent and 50 percent, respectively, with patients under the age of 45 doing better than the older ones. All patients must be maintained on thyroid therapy.

4. **Anaplastic carcinoma** is usually unresectable, and biopsy is the only role of surgery. Occasionally, however, total thyroidectomy can be done. Aggressive surgery does not change the fatal course of the disease. Radiation therapy and chemotherapy by adriamycin are being tried with limited success. Thyroid therapy is indicated for replacement. The thyroid gland can also be the site of lymphoma, as discussed before.

*If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical Systems, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).*

## The Parathyroid Glands

The parathyroid glands control calcium metabolism. Hyperactive gland(s) can give rise to primary hypercalcemia, which can be due to one of the following: (a) single adenoma (the most common cause), (b) multiple adenomas, (c) hyperplasia of the glands, or (d) carcinoma of a parathyroid gland (rarely). These patients infrequently present with a palpable mass in the neck. In fact, most of these patients are asymptomatic for a long time and their hypercalcemia is often discovered on routine testing of their serum chemistries. If hypercalcemic patients become symptomatic, they may present with nephrocalcinosis, weakness, peptic ulcers, pancreatitis, dyspepsia, or excessive diuresis.

Primary hypercalcemia is characterized by elevated serum calcium and serum parathormone levels. If serum calcium is elevated but the parathormone level is decreased, however, this is a secondary hypercalcemia. This is not due to parathyroid pathology, but can be due to one of the following conditions: (a) excessive use of diuretics, (b) metastatic malignancies, (c) hypervitaminosis, (d) sarcoidosis, (e) milk-alkali syndrome, or (f) chronic renal failure. Control of the underlying cause in secondary hypercalcemia will cause reversal except in patients with chronic renal failure who are on dialysis; subtotal parathyroidectomy is indicated in these cases.

There are four parathyroid glands in 90 percent of the patients; however, 5 percent may have three glands only, while 3.5 percent have five glands. Each gland weighs 35 to 40 mg. The parathyroid glands are pale structures and usually are located two on each side behind the thyroid gland. In 80 percent of the cases, the inferior thyroid artery supplies the lower two glands if not the four glands.

Several reports have described abnormal positions of the parathyroid glands, but the fact is that one or more may be displaced inferiorly into the upper mediastinum either anteriorly or posteriorly. Although a single adenoma in one gland can cause primary hypercalcemia in 80 to 90 percent of the cases and only 10 to 20 percent have multiple gland disease, it is highly recommended that the four glands be explored and biopsied at the time of the initial surgery to minimize the need for reexploration for persistent postoperative hypercalcemia.

Reoperative exploration for parathyroid pathology is successful in 70 to 80 percent of the cases, but it is extremely difficult and carries significant morbidity in the form of persistent hypercalcemia, hypoparathyroidism, and laryngeal nerve injury. In such cases, preoperative localization of the diseased glands by CT scan, arteriography, and venous sampling is justified. On the other hand, if normal parathyroid glands were accidentally removed or devascularized during surgery, they can be successfully autotransplanted to prevent hypercalcemia.

*Tumor Conferences are held weekly on Tuesday between 8 and 9 a.m. in Room N13E28 at the University of Maryland Hospital. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

***E. GEORGE ELIAS*** **MD**
**Professor of Surgery and Oncology**
**Director, Surgical Oncology Program**

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| | *Philip C. Federico, Esq.* | *301-234-1000* |
| *February* | *Raymond Caplan MD* | *301-466-2177* |
| | *L. Richards Phillips, Esq.* | *301-632-0990* |

# Cholesterol Treatment Recommendations for Adults

## Highlights of 1987 Report, National Cholesterol Education Program Adult Treatment Panel

**These highlights from the 1987 National Cholesterol Education Program Adult Treatment Panel's report offer practical detection, evaluation, and treatment recommendations for physicians. The panel composed of national experts in blood cholesterol control was convened by the National Heart, Lung, and Blood Institute with the goal of updating and adding more specific recommendations to basic policies set forth by previous expert committees, such as the 1984 NIH Consensus Panel on Lowering Blood Cholesterol to Prevent Heart Disease. The report was approved on October 5, 1987.**

The recommendations of the National Cholesterol Education Program Adult Treatment Panel's report deal with three primary topics: classification of blood cholesterol and patient evaluation, dietary treatment, and drug treatment. The panel addressed only patients age 20 and above; a separate panel will focus on children and adolescents. The treatment approach is uniform for adults of both sexes and all ages. There is room, however, for modification based on the judgment of the physician and the preference of the patient, particularly when dealing with young adults (20 to 29), the elderly (over age 60), and women.

**While these recommendations are intended primarily for physicians, it is important to note that these interventions also require the active involvement of dietitians, nurses, pharmacists, other health professionals, and patients themselves. Working together, the professional-patient team can successfully reduce the risk of coronary heart disease (CHD).**

### Key Concepts

*Initial Classification Based on Total Cholesterol*

- Total blood cholesterol levels are the basis for initial patient classification (Table 1).
- All patients with a level of 240 mg/dl or above, which is classified as high blood cholesterol, should receive a lipoprotein analysis. Patients with borderline-high blood cholesterol levels (200 to 239 mg/dl), who in addition have either definite CHD or at least two other CHD risk factors, should also have a lipoprotein analysis performed.
- All blood cholesterol levels above 200 mg/dl should be confirmed by repeat measurements, with the average used to guide clinical decisions.
- Other CHD risk factors should be taken into account in selecting appropriate follow-up measures for patients with borderline-high levels.

CHD risk factors as defined in the report include:

—Male sex
—Family history of premature CHD (definite myocardial infarction or sudden death before age 55 in a parent or sibling)
—Cigarette smoking (currently smokes more than 10 cigarettes per day)
—Hypertension
—Low HDL-cholesterol concentration (below 35 mg/dl confirmed by repeat mesurement)
—Diabetes mellitus
—History of definite cerebrovascular or occlusive peripheral vascular disease
—Severe obesity (≥30 percent overweight)

- In public screening programs, all patients with a level above 200 mg/dl should be referred to their physicians for evaluation and remeasurement.

*Classification Based on LDL-Cholesterol*

- The LDL-cholesterol level is the basis for decisions about initiating diet or drug therapy (Table 2).
- Patients with LDL-cholesterol levels of 160 mg/dl or greater are considered at high risk for CHD. These patients should be given cholesterol-lowering treatment.
- Patients with borderline-high-risk LDL-cholesterol levels (130 to 159 mg/dl) also should be treated to lower their cholesterol if they have defi-

**Table 1. Initial Classification Based on Total Cholesterol**

| | |
|---|---|
| <200 mg/dl | Desirable blood cholesterol |
| 200–239 mg/dl | Borderline-high blood cholesterol |
| ≥240 mg/dl | High blood cholesterol |

**Table 2. Classification Based on LDL-Cholesterol**

| | |
|---|---|
| <130 mg/dl | Desirable LDL-cholesterol |
| 130–159 mg/dl | Borderline-high-risk LDL-cholesterol |
| ≥160 mg/dl | High-risk LDL-cholesterol |

*HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.*

nite CHD or two other CHD risk factors (see above for a list of risk factors).

- The therapeutic goals recommended in the panel report, like the cholesterol levels for initiating therapy, are influenced by the presence of other CHD risk factors. Patients without definite CHD or two additional risk factors should reduce LDL-cholesterol to below 160 mg/dl. Patients with definite CHD or two CHD risk factors should have a goal of reducing LDL-cholesterol to below 130 mg/dl.
- The recommended goals are *minimal* goals. If lower levels can be achieved, risk may be further reduced.

*Dietary Treatment*

- Dietary treatment is the cornerstone of therapy to reduce blood cholesterol levels. The view that diet modification is impractical or doomed to failure is not justified. Many people have successfully modified their diets and reduced blood cholesterol substantially.
- A cholesterol-lowering diet can be tasty, satisfying, and consistent with good nutrition. Many patients will not need to alter their eating habits radically.
- Step 1 of dietary treatment calls for an intake of saturated fat of less than 10 percent of calories, total fat of less than 30 percent of calories, and dietary cholesterol of less than 300 mg/day. Step 2 calls for further reduction in saturated fat intake to less than 7 percent of calories and in cholesterol intake to less than 200 mg/day.
- Referral to a registered dietitian can facilitate dietary instruction and monitoring. With proper training, physician staff may perform these functions.
- For most patients, dietary therapy should be continued at least six months before deciding whether to add drug treatment. It is important that dietary therapy not be regarded as a failure prematurely.
- Although the goal of dietary therapy is to lower LDL-cholesterol concentration, total cholesterol can be used to monitor response to diet for convenience.

*Drug Treatment*

- Maximal efforts at dietary therapy should be made before initiating drug therapy and should be continued even if drug therapy is needed.
- The panel set the initiation levels for drug treatment in such a way as to create a protective barrier to the inappropriate overuse of cholesterol-lowering drugs.
- Patients with LDL-cholesterol levels of 190 mg/dl or greater, and those with LDL-cholesterol 160 to 189 mg/dl who also have definite CHD or two other risk factors, should be considered for drug therapy.
- Drugs available for consideration include: bile acid sequestrants (cholestyramine and colestipol), nicotinic acid, HMG CoA reductase inhibitors (lovastatin), gemfibrozil, probucol, and clofibrate.
- The bile acid sequestrants and nicotinic acid are considered the drugs of first choice. Both cholestyramine and nicotinic acid have been shown to lower CHD risk in clinical trials, and their long-term safety has been established. These drugs require considerable patient education to achieve adherence.
- Lovastatin is the first of a new class of drugs (the HMG CoA reductase inhibitors). These drugs are very effective in lowering LDL-cholesterol, but their effect on CHD incidence and their long-term safety have not been established.
- The other available drugs are not as effective in lowering LDL-cholesterol as are the drugs of first choice or lovastatin. Gemfibrozil and clofibrate are primarily effective for lowering elevated triglyceride but are not FDA approved for routine use in lowering cholesterol.
- Drug therapy is likely to continue for a lifetime. Thus, when dealing with the selection of bile acid sequestrants versus newer drugs that may be easier to take, safety must be emphasized.
- Cholesterol is an active, changing field. Ongoing and future investigations can be expected to expand and refine drug treatment options.

There will be further discussion of this report in the May 1988 issue of the *Maryland Medical Journal.*

*To obtain a copy of the Adult Treatment Panel's full report, write to: National Cholesterol Education Program, National Heart, Lung, and Blood Institute, C-200, Bethesda, MD 20892.*




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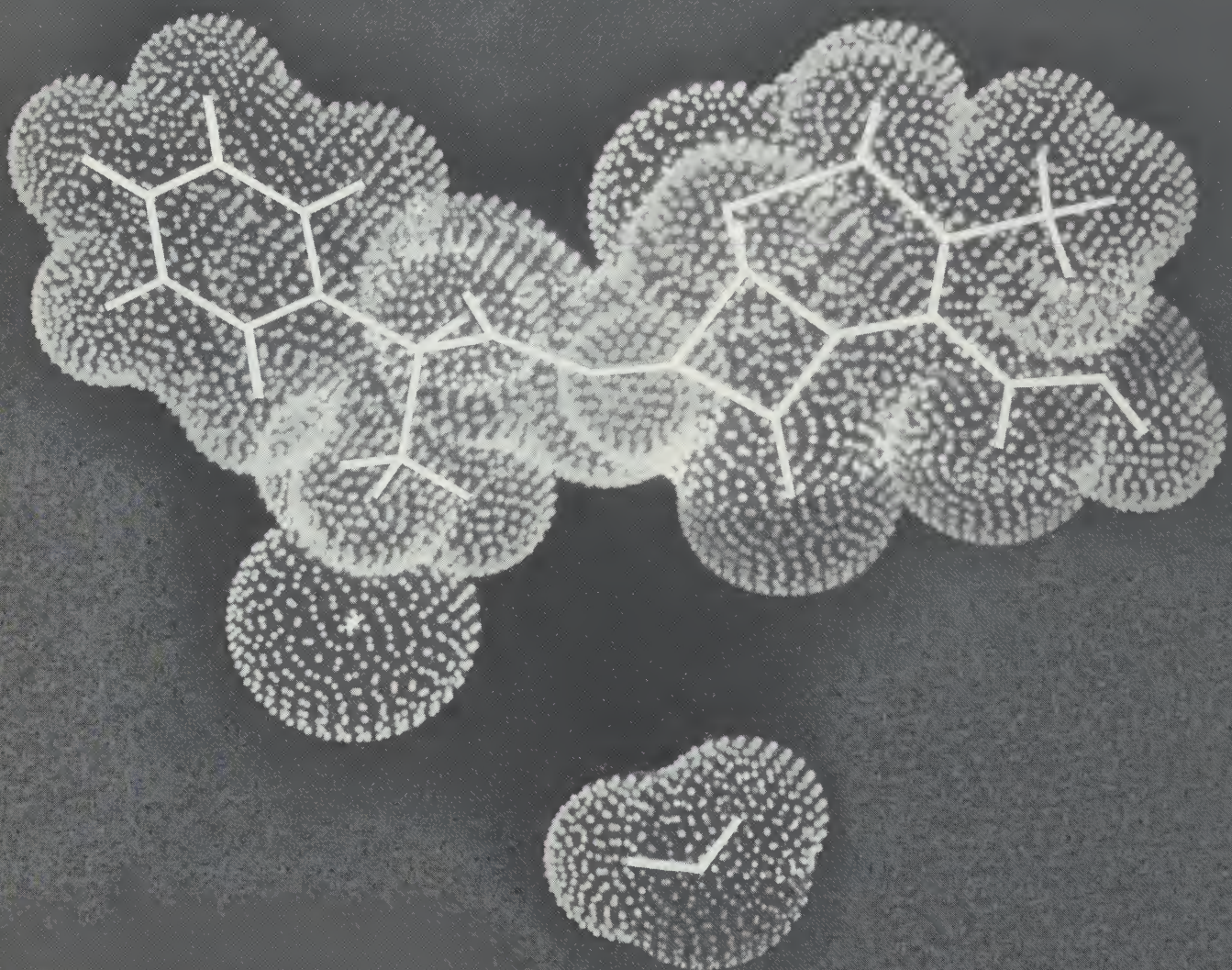
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ANNOUNCING

# NEW

# KEFTAB™

## cephalexin hydrochloride monohydrate



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Computer-generated molecular structure of cephalexin hydrochloride monohydrate

# Convenient 500-mg b.i.d. dosage and demonstrated effectiveness for treatment of:

- ☐ skin and skin structure infections*
- ☐ uncomplicated cystitis†
- ☐ pharyngitis‡

- New hydrochloride salt form of cephalexin—requires no conversion in the stomach before absorption
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- May be taken without regard to meals

*For other indicated infections, 250-mg tablets available for q.i.d. dosage*

## Priced less than Keflex® (cephalexin)

Keftab is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Penicillin is the drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever.

*Due to susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.
†Due to susceptible strains of *Escherichia coli*, *Proteus mirabilis*, and *Klebsiella* sp.
‡Due to susceptible strains of group A β-hemolytic streptococci.

**KEFTAB™**
**(cephalexin hydrochloride monohydrate)**

**Summary: Consult the package literature for prescribing information.**

**Indications and Usage:**

*Respiratory tract infections* caused by susceptible strains of *Streptococcus pneumoniae* and group A β-hemolytic streptococci.

*Skin and skin structure infections* caused by susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.

*Bone infections* caused by susceptible strains of *S aureus* and/or *Proteus mirabilis*.

*Genitourinary tract infections*, including acute prostatitis, caused by susceptible strains of *Escherichia coli*, *P mirabilis*, and *Klebsiella* sp.

**Contraindication:** Known allergy to cephalosporins.

**Warnings:** KEFTAB SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

**Precautions:**

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

**Adverse Reactions:**

- *Gastrointestinal*, including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

PV 2060 DPP [091887] 849336

# Discipline Commission Action

**In the Matter of**
**Fabio K. Banegura MD**
**Before the**
**Commission on Medical Discipline**

**Order For Emergency Suspension of Medical License**

Based on information received from the Division of Drug Control ("DDC") of the State Department of Health and Mental Hygiene and further investigation by the Committee on Drugs and Peer Review Committee of the Medical and Chirurgical Faculty of the State of Maryland ("Med-Chi") regarding the medical practice of Fabio K. Banegura MD (the "Respondent"), the Commission on Medical Discipline of Maryland (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

## Findings of Fact

1. At all times relevant to this Order, Respondent was and is currently licensed to practice medicine in Maryland.

2. On April 11, 1987, the Committee on Drugs of Med-Chi received a pharmacy survey conducted randomly by the DDC that indicated that Respondent was prescribing large amounts of Dilaudid and Percocet, controlled dangerous substances.

3. To confirm the information in the pharmacy survey, the Committee on Drugs asked Respondent to submit copies of his medical records for specific patients.

4. After reviewing the copies of patient records submitted by Respondent, the Committee on Drugs requested that Respondent appear for a personal interview.

5. Respondent met with the Committee on Drugs on July 21, 1987.

6. After the Respondent met with the Committee on Drugs, the Committee made the following findings of inappropriate medical care in a report to the Commission dated May 6, 1987.

a. Respondent prescribes controlled dangerous substances based on the patients limited verbal history (which usually include the drug patient wants) rather than based on an examination (see patients A, B, C, D, E, F, G, and H).

b. Respondent prescribes medications that contain high levels of addictive ingredients rather than trying less addicting medications (see patients listed under 6a above).

c. Respondent prescribed controlled dangerous substances to at least three patients, known by Respondent to be drug abusers, as noted in Respondent's medical records (see patient J, K, and E).

d. Respondent prescribed (to at least one patient) Librium, a controlled dangerous substance, to "wean" (Respondent's word) that patient from heroin (see patient J).

e. Respondent diagnosed several patients as having "renal colic" and prescribed Dilaudid, a controlled dangerous substance. The number of patients found in his random sampling of Respondent's practice who suffer from "renal colic" seemed to be more in one month than the average internist would see in 1 to 2 years (see patients D, E, F, and L).

7. The Committee on Drugs concluded that Respondent's prescribing practices, as shown in medical records reviewed by the Committee, indicated to the Committee that Respondent prescribes narcotics, controlled dangerous substances, and other drugs in excess of therapeutic warrants and/or without valid medical information.

8. The Committee on Drugs concluded its report by Finding the Respondent "presents an imminent danger to the health and safety of his patients" and that "his medical license should be suspended on an emergency basis" because "there is cause to believe that Respondent is in violation of Section 14–504(4), (23) and possibly (12) of the Health Occupations Article."

9. Based on the foregoing information, the Commission has reason to believe that Respondent may have violated §14-504(4), and (12) of the Health Occupations Article of the Annotated Code of Maryland which provides that the Commission may discipline a physician if physician:

a. (i)s professionally, physically, or mentally incompetent" (HO §14-504(4); and
b. (w)illfully makes or files a false report or record in the practice of medicine. (HG §14-504(12).

## Conclusion of Law

For the reasons set forth in the foregoing paragraphs, the Commission finds that emergency action is required in this case under State Government Article §10-405(b), Annotated Code of Maryland, because Respondent's continued ability to prescribe controlled dangerous substances poses an imminent and grave danger to the public health, safety, and welfare and that the situation imperatively requires emergency action by the Commission.

## Order

It is this 10th day of August 1987, by the Commission on Medical Discipline of Maryland

ORDERED that pursuant to the authority vested in the Commission by State Government Article §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine is SUMMARILY SUSPENDED to the extent that it permits him to prescribe controlled dangerous substances; and be it further

ORDERED that Respondent shall immediately cease and desist prescribing any and all controlled dangerous substances; and be it further

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*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission's Executive Director (1) his federal controlled dangerous substances registration certificate and (2) his current State controlled dangerous substance registration permit; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date on which the Commission receives a written request for such a hearing from Respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

• • •

## In the Matter of Nathan Centers MD Before the Commission on Medical Discipline

### Findings of Fact, Conclusions of Law, and Order

Based on information coming to its attention, from the Committee on Physical Rehabilitation of the Medical and Chirurgical Faculty of Maryland ("Med-Chi"), the Commission on Medical Discipline of Maryland ("the Commission") on March 27, 1987, suspended on an emergency basis the license held by Nathan Centers MD ("Respondent") to practice medicine in Maryland and charged Respondent with violation of §14-504(4), (8), and (9) of the Maryland Medical Practice Act (the "Act"), Health Occupations Article §14-101 *et seq.*, Annotated Code of Maryland, which provides:

> Subject to the hearing provision of §14-505 of this subtitle, the Commissions on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> (4) Is professionally, physically, or mentally incompetent.
>
> (8) Habitually is intoxicated.
>
> (9) Is addicted to, or habitually abuses any narcotic or controlled dangerous substance, as defined in Article 27 of the Code, or other drug that is in excess of therapeutic amounts or without valid medical indication.

Respondent was notified of the charges by letter dated March 27, 1987. A hearing was scheduled for May 5, 1987. On August 25 and September 14, 1987 prehearing conferences were held. As a result of discussions and negotiations, Respondent agreed to enter into the following Consent Order.

### Findings of Fact

Based upon the information in its files, and otherwise made known to it, the Commission finds that:

1. Respondent is a physician licensed and practicing in Maryland both currently and at all times material to the allegations relating to this matter;

2. Respondent came to the attention of the Medical and Chirurgical Faculty's Committee on Physician Rehabilitation in January 1982 as a result Respondent having entered the Seneca House for a 29-day alcoholism treatment.

3. Since January 1986 Respondent has entered at least four (4) major programs for the treatment of alcohol and/or substance abuse.

4. The most recent episode evidencing substance addiction and abuse occurred on February 17, 1987 when Respondent was found on the grounds of Sheppard Pratt Hospital ("Sheppard Pratt") in an intoxicated and addictive state.

5. Staff at Sheppard Pratt on February 17, 1987, arranged to have Respondent transferred to the Greater Baltimore Medical Center for detoxification and suspected overdose.

6. On February 24, 1987, Respondent was transferred to Sheppard Pratt for treatment of chemical dependency and possible psychiatric problems.

7. On March 26, 1987, Respondent was discharged from Sheppard Pratt to Keswick House, a halfway house for the treatment of drug abusers and addictive individuals, on an out-patient basis.

8. Respondent was evaluated by Jonas R. Rappeport MD, a psychiatrist, on May 24, 1987 and by Dennis Madden, PhD who conducted a neuro psychological evaluation of Respondent on June 12, 1987.

9. Michael Hayes MD has offered to supervise Respondent in a highly supervised and controlled employment situation for the practice of medicine on a limited basis.

### Conclusions of Law

Based upon the foregoing Findings of Facts, the Commission on Medical Discipline, by unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated §14-504(4), (8), and (9) of the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, and finds Respondent GUILTY of those charges.

### Order

Based upon the foregoing Findings of Fact and Conclusions of Law, it is this 24th day of September 1987, by unanimous vote of a quorum of the members of the Commission on Medical Discipline,

ORDERED that the suspension of the license of Respondent, Nathan Centers MD, an individual licensed to practice medicine in the State of Maryland, is hereby STAYED; and be it further

ORDERED that the Respondent shall be placed on PROBATION subject to the following terms and conditions:

1. That Respondent shall participate in:

   a. Group therapy at Sheppard Pratt Hospital, or some other group therapy program approved by the

Commission, at least one session per week;

b. Individual Therapy at Sheppard Pratt Hospital with Jeffrey Klein PhD, or some other individual therapy program approved by the Commission, for at least one session per week, with Dr. Klein or the health professional providing the individual therapy to issue a report of respondent's progress to the Commission every six months, the first report to be issued one month after the date of this Order; and

c. Narcotics Anonymous or Alcoholics Anonymous for at least three sessions per week with the sessions not to be done on consecutive days and no more than one session per day to be counted for the purposes of this Order;

2. That Respondent shall have a urinalysis done randomly, supervised, and at least once per week in a program approved by the Commission with copies of the results provided to the Commission;

3. That Respondent shall practice medicine only under the supervision of Dr. Michael Hayes, unless otherwise expressly permitted by the Commission;

4. That Respondent's license to practice medicine shall be restricted in that Respondent may not prescribe any controlled dangerous substance, except methadone, and Respondent may only prescribe methadone while under the supervision of Dr. Michael Hayes;

5. That Respondent shall not violate any other provisions of the Act; and

6. That Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after the expiration of two (2) years from the date of this Order, the Commission will entertain a petition for altering the terms of Respondent's probationary status upon Respondent's demonstrating to the satisfaction of the Commission that he has complied with the terms and conditions of his probation. If the Commission determines that he has not complied with the terms and conditions of this probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay on the suspension may be lifted and the Commission, after notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

### Consent

By this Consent, I hereby admit the truth of the above Findings of Fact and accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I understand that I am waiving all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland. I sign this Consent without reservation and after conferring with counsel. I fully understand its meaning.

***NATHAN CENTERS*** **MD**

• • •

## In the Matter of Albert Chalom MD Before the Commission on Medical Discipline

### Order for Emergency Suspension of License to Extent It Permits Prescribing of Controlled Dangerous Substances

Based on a complaint, a pharmacy survey conducted by the Division of Drug Control ("DDC") of the State Department of Health and Mental Hygiene, and further investigation by the Committee on Drugs and Peer Review Committee of the Medical and Chirurgical Faculty of the State of Maryland ("Med-Chi") regarding the medical practice of Albert Chalom MD (the "Respondent"), the Commission on Medical Discipline of Maryland (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

### Findings of Fact

1. At all times relevant to this Order, Respondent was and is currently licensed to practice medicine in Maryland.

2. The Committee on Drugs of Med-Chi received a complaint alleging that Respondent:

a. Was prescribing controlled dangerous substances to patients who were being detoxified;

b. Was prescribing to patients of all ages and of both sexes, even though Respondent training has been limited to practice as an obstetrician/gynecologist; and

c. Was prescribing inappropriate amounts of penicillin to children.

3. To confirm the allegation of the complaint, the Committee on Drugs asked the DDC to conduct a pharmacy survey in the area of Respondent's practice.

4. As a result of the complaint and the survey, the Committee on Drugs had cause to believe that Respondent used prescribing practices that were questionable for an obstetrician/gynecologist.

5. On March 2, 1987, the Committee on Drugs asked Respondent to submit copies of his medical records for specific patients.

6. After reviewing the copies of patient records submitted by Respondent, the Committee on Drugs requested that Respondent appear for a personal interview.

7. Respondent met with the Committee on Drugs on March 24, 1987.

8. After the Respondent met with the Committee on Drugs, the Committee made the following findings in a report to the Commission dated May 6, 1987.

a. Respondent is trained as an obstetrician/gynecologist who is practicing general medicine.

b. Respondent has not received training in general medicine and does not attend continuing medical education courses in general medicine.

c. Respondent prescribed controlled dangerous substances to at least one patient, A, known to be a drug abuser, as noted in Respondent's medical records. This practice is not appropriate medical care.

d. Respondent made a diagnosis of anxiety and/or depression on general patients simply by asking the patients to describe the problem. Respondent then prescribed controlled dangerous substances to these patients without performing a physical examination or obtaining a psychiatric consultation. This practice is not appropriate medical care (see patients B, C, D, and E).

e. Contrary to appropriate medical care, Respondent regularly prescribes controlled dangerous substances without taking an appropriate history and physical, without making a diagnosis, without providing treatment to than [*sic*] recommendation, without requesting lab work, and without making referrals (see patients listed under 9(c) and (d) and patient F).

10. The Committee on Drugs concluded its report by finding the Respondent "presents an imminent danger to the health and safety of his patients" and that "immediate action should be taken" because "there is cause to believe that Respondent is in violation of Section 14-504(4) of the Health Occupations Article."

11. Based on the foregoing information, the Commission has reason to believe that Respondent may have violated §14-504(4) of the Health Occupations Article of the Annotated Code of Maryland which provides that the Commission may discipline a physician if physician "(i)s professionally, physically, or mentally incompetent."

### Conclusions of Law

For the reasons set forth in the foregoing paragraphs, the Commission finds that emergency action is required in this case under State Government Article §10-405(b), Annotated Code of Maryland, because Respondent's continued ability to prescribe controlled dangerous substances poses an imminent and grave danger to the public health, safety, and welfare and that the situation imperatively requires emergency action by the Commission.

### Order

It is this 16th day of August 1987, by the Commission on Medical Discipline of Maryland

ORDERED that pursuant to the authority vested in the Commission by State Government Article §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine is SUMMARILY SUSPENDED to the extent that it permits him to prescribe controlled dangerous substances; and be it further

ORDERED that Respondent shall immediately cease and desist prescribing any and all controlled dangerous substances; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission's Executive Director (1) his federal controlled dangerous substances registration certificate and (2) his current State controlled dangerous substance registration permit; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date on which the Commission receives a written request for such a hearing from Respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

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## In the Matter of Albert Chalom MD Before the Commission on Medical Discipline

### Findings of Fact Conclusions of Law, and Order

Based upon information coming to its attention from the Committee on Drugs of the Medical and Chirurgical Faculty of Maryland ("Med-Chi"), the Commission on Medical Discipline of Maryland (the "Commission") issued an Order suspending on an emergency basis the medical license of Albert Chalom MD ("Respondent") to the extent that it permits prescribing of controlled dangerous substances on August 10, 1987 and charged Respondent with violation of §14-504(4) of the Maryland Medical Practice Act, (the "Act") Health Occupations Article §14-101 *et seq.*, Annotated Code of Maryland, which provides

> Subject to the hearing provision of §14-505 of this subtitle, the Commission on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> (4) Is professionally, physically, or mentally incompetent.

Respondent was notified of the charges by letter dated August 10, 1987. In the letter, a hearing was scheduled for November 17, 1987. On September 9, 1987, a prehearing conference was held. As a result of discussions and negotiations at the prehearing confer-

ence, Respondent agreed to enter into the following Consent Order.

### Findings of Fact

1. The Respondent is a physician licensed and practicing in Maryland both currently and at all times material to the allegations relating to this matter;

2. An investigation was made into the medical practice of Respondent by the Committee on Drugs of Med-Chi in response to a complaint from the Division of Drug Control of the Maryland Department of Health and Mental Hygiene.

3. Respondent was trained as an obstetrician/gynecologist, Respondent practices general medicine, but Respondent received no training in general medicine beyond his internship and continuing medical education conferences he has attended.

4. As a result of the findings and recommendations from the Committee on Drugs of Med-Chi, the Commission has determined that:

a. Respondent prescribed controlled dangerous substance to at least one patient, patient #1,* known to be addicted to drugs.

b. Respondent prescribed controlled dangerous substances to general patient #2 to #5 who complained of anxiety and/or depression without noting an adequate physical examination or obtaining a psychiatric consultation.

c. Respondent prescribed inappropriate amounts of penicillin to a child, patient #6.

d. Respondent's medical records for patients #1 to #7 contain dates of visits, chief complaints, diagnosis, and medication prescribed without noting an adequate physical examination, histories, treatment plans, referrals, or consultations.

5. The acts and omissions listed in paragraph 4(a)–(d) of these Findings of Fact demonstrate a lack of knowledge or skill necessary for the proper practice of medicine in Maryland.

### Conclusions of Law

Based on the foregoing Findings of Fact, the Commission on Medical Discipline, by unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated §14-504(4) of the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, and finds Respondent GUILTY of that charge.

### Order

Based upon the foregoing Findings of Facts and Conclusions of Law, it is this 6th day of October 1987 by unanimous vote of a quorum of the members of the Commission on Medical Discipline, hereby

ORDERED, that the license of Respondent, Albert Chalom MD, an individual licensed to practice medicine generally in the State of Maryland, is hereby SUSPENDED; and be it further

ORDERED, that the suspension of Respondent's license to practice medicine generally shall be immediately STAYED, and Respondent placed on PROBATION subject to the following terms and conditions but that Respondent's license to practice medicine remains SUSPENDED to the extent that it permits Respondent to prescribe controlled dangerous substances:

1. That Respondent agrees not to contest the emergency suspension of Respondent's license to the extent that it permit him to prescribe controlled dangerous substances;

2. That Respondent shall enter into a program of remedial training in family practice that is approved by the Commission;

3. That Respondent shall have his practice reviewed quarterly by the appropriate Peer Review Committee on Med-Chi during the term of his Order; the first such review to be made three months after Respondent has begun the remedial training program.

4. That suspension of Respondent's license to practice medicine to the extent of permitting Respondent to prescribe controlled dangerous substances will be removed on petition from Respondent, after Respondent has demonstrated to the satisfaction of the Commission that he has both:

a. successfully completed the program of remedial training as set forth in paragraph (2) of this Order; and

b. sent to the Commission, and the Commission accepts, a finding by the Respondent's mentor(s) in this remedial training program that Respondent should be permitted to prescribe controlled dangerous substances;

5. That Respondent shall not violate any other provisions of the Act; and

6. That Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after expiration of three (3) years from the date of this Order, the Commission will entertain a petition for termination of Respondent's probationary status and for restoration of his license to practice medicine without condition or restriction, upon Respondent's demonstrating to the satisfaction of the Commission that he has complied with the terms and conditions of his probation. If the Commission determines that he has not complied with the terms and conditions of his probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay of the suspension may be removed and the Commission, after

* The names of patients are attached to a list that is kept with the Commission, but is not a part of this Order.

notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

*HILARY T. O'HERLIHY* MD, Chairman
Commission on Medical Discipline

### Consent

By this Consent, without admitting the truth of the above noted Findings of Fact, I nonetheless accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony and to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I understand that I am waiving all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland. I sign this Consent without reservation and after conferring with counsel. I fully understand its meaning.

*ALBERT CHALOM* MD

• • •

### In the Matter of Francesco B. Di Leo MD Before the Commission on Medical Discipline

### Amendment of Agreement Staying Order for Emergency Suspension

This Order amends the Conditions contained in paragraphs 5 and 7 of the previous Agreement entered into by the Commission on Medical Discipline (the "Commission") and Francesco B. Di Leo MD ("Respondent"). Only Conditions 5 and 7 are revised. The remaining statements and conditions in the Order remain in full force and effect.

### Order for Revised Conditions

IT IS HEREBY ORDERED this 22nd day of September 1987 by the Commission on Medical Discipline, that the following conditions be substituted for the conditions 5 and 7, in the Agreement.

5. Respondent may only practice psychiatry at Springfield State Hospital, Sykesville, MD under the supervision of Bruce Hershfield MD, superintendent of Springfield Hospital.

a. Dr. Hershfield may delegate his supervisory responsibilities to a Board certified psychiatrist on his staff, but shall be responsible for assuring that the supervision, mandated by this Order, occurs.

b. The supervisor shall review all underlying information forwarded to him/her by the Commission or by Peer Review.

c. The supervisor shall notify Peer Review, of the Maryland Psychiatric Association ("Peer Review") that the supervisory relationship has commenced, and that he/she understands all terms of the Agreement and Amendment and has reviewed the underlying documents.

d. The supervisor shall arrange for, at minimum, weekly supervisory sessions with Respondent. However, the supervisor shall determine how much time each week is needed to assess Respondent's competence to practice psychiatry.

e. The supervisor shall make monthly written reports to Peer Review assessing Respondent's practice, the reports being due on the fifteenth (15th) of each month, and will meet with Peer Review if requested.

f. In the event that the supervisor believes that the Respondent is a danger to his patients, himself, is not competent to practice psychiatry, or is in violation of the Agreement, the supervisor shall immediately report this fact to Peer Review.

g. The supervisor will determine what prescription drugs Respondent may prescribe without a countersignature and will so inform Peer Review.

7. Paragraph 7 is deleted.

*HILARY T. O'HERLIHY* MD, Chairman
Commission on Medical Discipline


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If you are moving or planning to, please let us know so that you won't miss a single issue of the **Journal.** Just fill out the form below and mail it to: Doris Cicchini, **Journal,** 1211 Cathedral St., Balto., MD 21201.

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**BRIEF SUMMARY**

**CONTRAINDICATIONS**
There are no known contraindications to the use of sucralfate.

**PRECAUTIONS**
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

**Drug Interactions:** Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

**Pregnancy:** Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS**
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

**DOSAGE AND ADMINISTRATION**
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

**HOW SUPPLIED**
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

**References:**
1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

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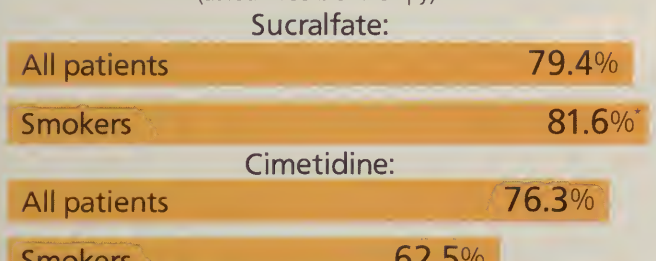
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January 1988

Dear Doctor:

The 1988 Maryland General Assembly promises to be an extremely active legislative session. Medicine will face challenges on a wide range of concerns and issues. To meet the challenges that lie ahead and to guarantee the citizens of Maryland the highest quality of health care, individual physicians must take a more active role in the legislative process. Many physicians volunteer endless hours of time working on the Legislative Committee. However, these selfless practitioners represent only a fraction of the physicians in this state.

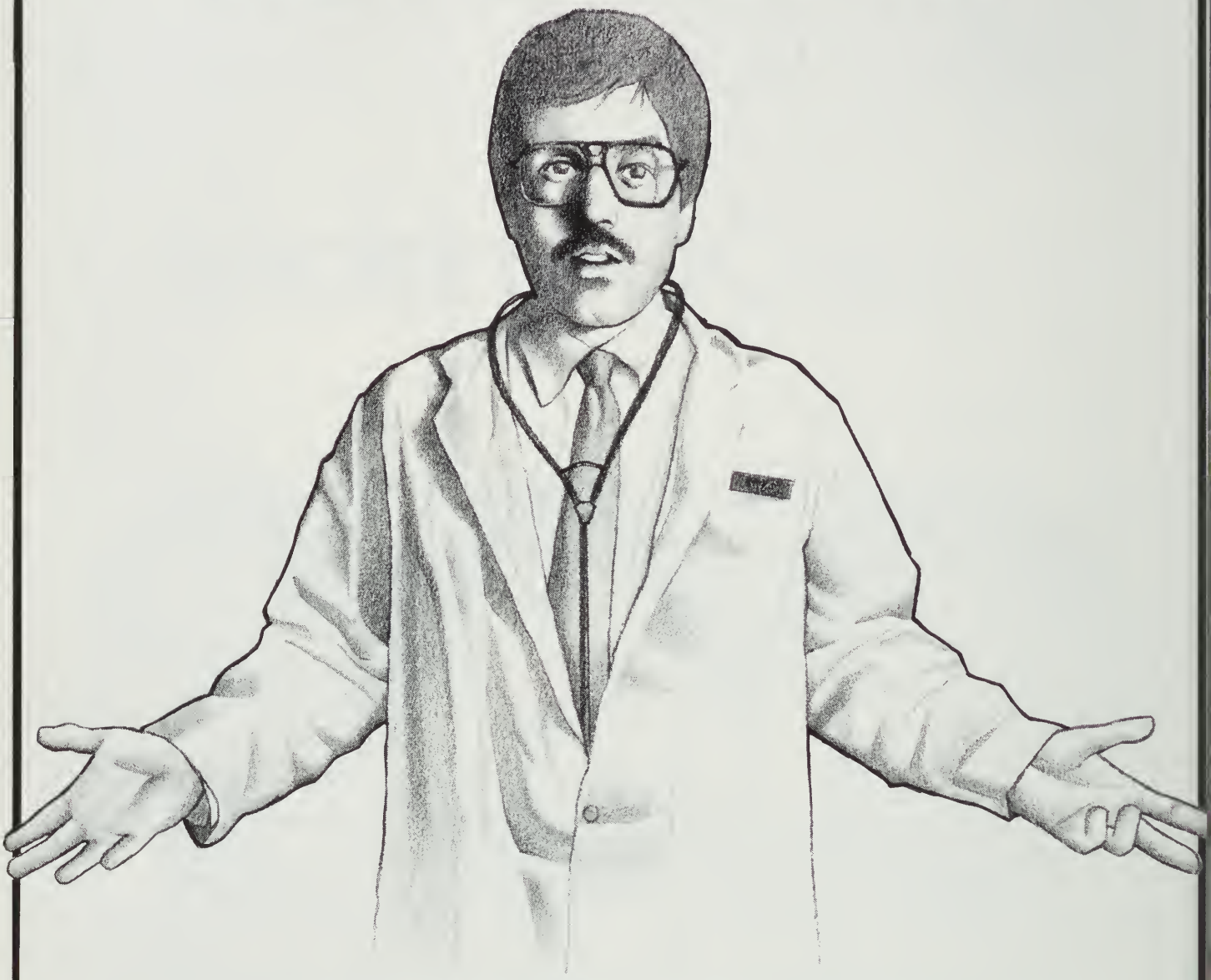
It is necessary that all physicians in Maryland share the responsibility for preserving and enhancing the finest medical system in the world. Any physician who cares about the fate of physicians and the practice of medicine should join the Maryland Medical Political Action Committee.

It is imperative that you work through your local Component and Specialty Medical Societies as well as through the Faculty's Legislative Committee. Please call the Government Relations Department at 1-800-492-1056 or in the Baltimore area 539-0872 to offer your assistance.

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# The Legislative Process*

## From "Hopper" to Enactment

The drafting of legislation requires the skill of experienced and trained personnel. This service is rendered by the Department of Legislative Reference. A bill or joint resolution may be introduced in advance of regular sessions and is styled a "prefiled bill." A bill is filed ("is dropped into the hopper") with the Secretary of the Senate or the Clerk of the House, is given a number, and is readied for its first reading on the floor. Bills may be introduced in either chamber until the last 35 days of the session. After that, bills may be introduced only with the consent of two-thirds of the membership.

**First Reading** The Reading Clerk, when the session has convened, reads the title and the presiding officer assigns the bill to the appropriate committee.

**Reference to Committee** The committees meet daily during the session to receive testimony and take action on bills assigned. Citizens are encouraged to present their views on the subject matter by mail or by personal appearance. Legislative agents (lobbyists), representing organized interest groups, speak at these hearings, either to oppose or support the proposed legislation. The Department of Fiscal Services prepares a fiscal analysis for each bill and these fiscal notes are considered during the committee deliberations.

Unfavorable committee action, which may mean legislative "death," frequently requires as much, or more, committee discussion and time as favorable committee action, which sends the bill to the floor for second reading and floor consideration.

**Second Reading and Floor Consideration** The bill is reported to the floor by the committee (favorably, unfavorably, or without recommendation, and with or without committee amendment). It is open to amendment from the floor, and the ultimate form of the bill must be determined on second reading. Committee action may be reversed but this is infrequent.

**Third Reading** The bill must be printed for third reading with all amendments included in this final version. No amendments may be presented on third reading in the chamber of its origin, and the bill must be passed by a majority of the elected membership.

**Second Chamber** The procedure follows a pattern identical with that of the chamber in which the bill originated, *except* amendments may be proposed during third reading as well as second reading. If not amended in the second chamber, final passage may occur without reprinting.

## Consideration of Bills Originating in One Chamber and Amended in Second Chamber

If amended in the Second Chamber, the bill is returned to the chamber of origin where a vote is taken on a motion to concur or reject the amendments. If concurrence is voted, the bill itself is voted on as amended and action is complete. The bill is reprinted, or enrolled, to include the added amendments before submitting it to the Governor.

If the amendments are rejected, two courses of action are possible: 1) the amending chamber may be requested to withdraw its amendments, or 2) upon refusal of withdrawal of amendments, either chamber may request a conference committee to resolve the differences between the two chambers.

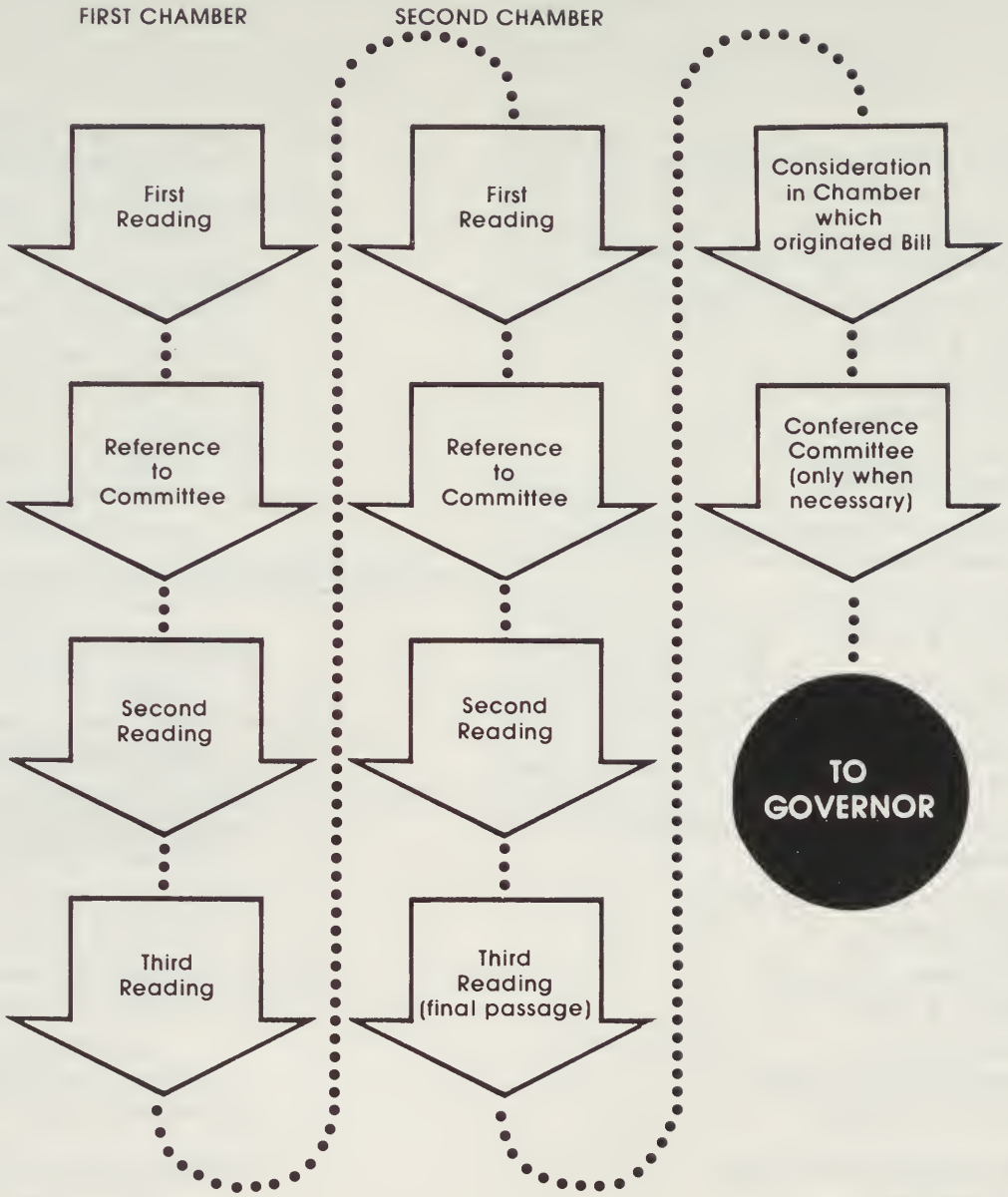
**Conference Committee** A report of a conference committee goes back to both chambers to be adopted or rejected without amendment. If the Conference Committee report is adopted, the bill is voted upon for final passage in each house. If the Conference Committee report is rejected by either house, the bill fails.

**Presentation of Bills to the Governor** Presentation of all bills, except the budget bill and constitutional amendments, to the Governor is mandatory. The budget bill becomes law upon its final passage and cannot be vetoed. Bills must be presented to the Governor within twenty days following adjournment of a session, and in the case of such bills, the Governor may veto within thirty days after presentation to him. If he does not veto a bill it becomes a law. He may not veto a constitutional amendment.

**The Power to Override a Veto** rests with the Legislature. If a bill is vetoed during a regular session, the veto message is considered immediately. If a bill presented after the session is vetoed, the veto message must be considered immediately at the next regular or special session of the Legislature, except that the Legislature during the first year of a new term may not override a veto. A three-fifths vote of the elected membership in each chamber is necessary to override a veto.

* Information provided by the State of Maryland Department of Legislative Reference, F. Carvel Payne, Director.

## The Progress of a Bill



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| **Delegate Hattie N. Harrison** | 323 HOB<br>Annapolis 21401<br>841-3325 | 2503 East Preston St.<br>Baltimore 21213<br>342-4414 | **45** | Baltimore City | Economic Matters | 14 |
| **Senator Joseph S. Bonvegna** | 311 SOB<br>Annapolis 21401<br>841-3598 | 3511 Gough Street<br>Baltimore 21224<br>276-8500 | **46** | Baltimore City | Finance | 20 |
| **Delegate Anthony M. DiPietro, Jr.** | 316 HOB<br>Annapolis 21401<br>841-3303 | 225 South Clinton St.<br>Baltimore 21224<br>327-2146 | **46** | Baltimore City | Environmental Matters | 9 |
| **Delegate Cornell N. Dypski** | 316 HOB<br>Annapolis 21401<br>841-3303 | 638 S. Decker Ave.<br>Baltimore 21224<br>276-1974 | **46** | Baltimore City | Judiciary | 8 |
| **Delegate American Joe Miedusiewski** | 316 HOB<br>Annapolis 21401<br>841-3303 | 625 S. Luzerne Ave.<br>Baltimore 21224<br>276-8225 | **46** | Baltimore City | Constitutional & Administrative Law | 13 |

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| **Senator George W. Della, Jr.** | 207 SOB<br>Annapolis 21401<br>841-3600 | 801 Light Street<br>Baltimore 21230<br>244-8400 | **47** | Baltimore City | Finance | 5 |
| **Delegate R. Charles Avara** | 429 HOB<br>Annapolis 21401<br>841-3547 | 3508 Coolidge Ave.<br>Baltimore 21229<br>644-3057 | **47** | Baltimore City | Appropriations | 21 |
| **Delegate Joseph W. O'Malley** | 322 HOB<br>Annapolis 21401<br>841-3319 | 604 Jeffrey St.<br>Baltimore 21225<br>355-4376 | **47** | Baltimore City | Economic Matters | 9 |
| **Delegate Paul Weisengoff** | 322 HOB<br>Annapolis 21401<br>841-3319 | 923 Joh Avenue<br>Baltimore 21229<br>525-2962 | **47** | Baltimore City | Ways & Means | 21 |
| **Senator Raymond E. Beck** | 410 SOB<br>Annapolis 21401<br>841-3683 | 189 East Main St.<br>Westminster 21157<br>848-4460 | **5** | Baltimore County | Budget & Taxation | 15 |
| **Delegate Lawrence A. LaMotte** | 209 HOB<br>Annapolis 21401<br>841-3371 | 40 W. Chesapeake Ave.<br>Suite 515<br>Towson 21204<br>461-5548 | **5** | Baltimore County | Environmental Matters | 5 |
| **Senator Michael J. Collins** | 211 SOB<br>Annapolis 21401<br>841-3642 | 418 Eastern Blvd.<br>Baltimore 21221<br>686-4535 | **6** | Baltimore County | Economic & Environmental Affairs | 8 |
| **Delegate R. Terry Connelly** | 303 HOB<br>Annapolis 21401<br>841-3384 | 418 Eastern Blvd.<br>Baltimore 21221<br>391-7800 | **6** | Baltimore County | Economic Matters | 9 |
| **Delegate E. Farrell Maddox** | 303 HOB<br>Annapolis 21401<br>841-3384 | 418 Eastern Blvd.<br>Baltimore 21221<br>391-7800 | **6** | Baltimore County | Judiciary | 1 |
| **Delegate Michael H. Weir** | 303 HOB<br>Annapolis 21401<br>841-3384 | 418 Eastern Blvd.<br>Baltimore 21221<br>391-7800 | **6** | Baltimore County | Environmental Matters | 13 |
| **Senator Norman R. Stone, Jr.** | 216 SOB<br>Annapolis 21401<br>841-3587 | 6905 Dunmanway<br>Dundalk 21222<br>288-5270 | **7** | Baltimore County | Judicial Proceedings | 24 |
| **Delegate John S. Arnick** | 426 HOB<br>Annapolis 21401<br>841-3464 | 7918 Diehlwood Rd.<br>Baltimore 21222<br>288-2900 | **7** | Baltimore County | Economic Matters | 17 |
| **Delegate Louis L. DePazzo** | 305 HOB<br>Annapolis 21401<br>841-3334 | 38 South Dundalk Ave.<br>Baltimore 21222<br>288-9303 | **7** | Baltimore County | Judiciary | 9 |
| **Delegate Robert R. Staab** | 305 HOB<br>Annapolis 21401<br>841-3334 | 1930A Robinwood Rd.<br>Baltimore 21222<br>285-8020 | **7** | Baltimore County | Appropriations | 9 |
| **Senator Thomas L. Bromwell** | 215 SOB<br>Annapolis 21401<br>841-3620 | 7503 Belair Rd.<br>Baltimore 21236<br>665-5470 | **8** | Baltimore County | Finance | 5 |
| **Delegate Joe Bartenfelder** | 307 HOB<br>Annapolis 21401<br>841-3332 | 8410 Belair Road<br>Baltimore 21236<br>688-2105 | **8** | Baltimore County | Judiciary | 4 |
| **Delegate William J. Burgess** | 307 HOB<br>Annapolis 21401<br>841-3365 | 8215 Edwill Ave.<br>Baltimore 21237<br>866-6547 | **8** | Baltimore County | Ways & Means | 8 |
| **Delegate Donna M. Felling** | 307 HOB<br>Annapolis 21401<br>841-3365 | 4701 Vicky Road<br>Baltimore 21236<br>256-5024 | **8** | Baltimore County | Environmental Matters | 1 |

| | Session Address | District Address | Legislative District | County or City | Committee | Years in Legislature |
|---|---|---|---|---|---|---|
| **Senator F. Vernon Boozer** | 403 SOB<br>Annapolis 21401<br>841-3706 | 614 Bosley Ave.<br>Towson 21204<br>828-0669 | **9** | Baltimore County | Judicial Proceedings | 13 |
| **Delegate John J. Bishop** | 308 HOB<br>Annapolis 21401<br>841-3359 | 1520 Doxbury Road<br>Towson 21204<br>337-5261 | **9** | Baltimore County | Constitutional & Administrative Law | 1 |
| **Delegate Michael Gisriel** | 308 HOB<br>Annapolis 21401<br>841-3359 | 2 Southerly Ct. #406<br>Towson 21204<br>583-5655 | **9** | Baltimore County | Ways & Means | 1 |
| **Delegate Martha S. Klima** | 308 HOB<br>Annapolis 21401<br>841-3359 | 1403 Newport Pl.<br>Lutherville 21093<br>337-2799 | **9** | Baltimore County | Appropriations | 5 |
| **Senator Francis X. Kelly** | 131 SOB<br>Annapolis 21401<br>841-3606 | 5 Shawan Road<br>Hunt Valley 21030<br>252-5025 | **10** | Baltimore County | Budget & Taxation | 9 |
| **Delegate Robert L. Ehrlich, Jr.** | 309 HOB<br>Annapolis 21401<br>841-3350 | 5 Elphin Ct., #102<br>Timonium 21093<br>252-4180 | **10** | Baltimore County | Judiciary | 1 |
| **Delegate A. Wade Kach** | 309 HOB<br>Annapolis 21401<br>841-3350 | 214 Ashland Road<br>Hunt Valley 21031<br>683-1962 | **10** | Baltimore County | Economic Matters | 13 |
| **Delegate Ellen R. Sauerbrey** | 312 HOB<br>Annapolis 21401<br>841-3401 | 4122 Sweet Air Rd.<br>Baldwin 21013<br>592-6707 | **10** | Baltimore County | Ways & Means | 9 |
| **Senator Paula C. Hollinger** | 206 SOB<br>Annapolis 21401<br>841-3131 | 3708 Lanamer Rd.<br>Randallstown 21133<br>655-2525 | **11** | Baltimore County | Economic & Environmental Affairs | 8 |
| **Delegate Leon Albin** | 310 HOB<br>Annapolis 21401<br>841-3342 | 6512 Edenvale Rd.<br>Baltimore 21209<br>486-8097 | **11** | Baltimore County | Constitutional & Administrative Law | 1 |
| **Delegate Theodore Levin** | 310 HOB<br>Annapolis 21401<br>841-3342 | 626 Ralston Ave.<br>Baltimore 21208<br>486-0462 | **11** | Baltimore County | Ways & Means | 13 |
| **Delegate Richard Rynd** | 310 HOB<br>Annapolis 21401<br>841-3342 | 99 Painters Mill Rd.<br>Owings Mills 21117<br>484-0426 | **11** | Baltimore County | Appropriations | 8 |
| **Senator John C. Coolahan** | 205 SOB<br>Annapolis 21401<br>841-3653 | 1345 Stevens Ave.<br>Arbutus 21227<br>242-5699 | **12** | Baltimore County | Judicial Proceedings | 17 |
| **Delegate Kenneth H. Masters** | 121 HOB<br>Annapolis 21401<br>841-3488 | 1809 Edmondson Ave.<br>Catonsville 21228<br>747-0407 | **12** | Baltimore County | Judiciary | 9 |
| **Delegate Louis P. Morsberger** | 304 HOB<br>Annapolis 21401<br>841-3378 | 612 Hilton Avenue<br>Catonsville 21228<br>747-0407 | **12** | Baltimore County | Economic Matters | 13 |
| **Delegate Nancy L. Murphy** | 304 HOB<br>Annapolis 21401<br>841-3378 | One Newburg Ave.<br>Baltimore 21228<br>788-5550 | **12** | Baltimore County | Appropriations | 5 |

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|---|---|---|---|---|---|---|
| **Senator Edward J. Kasemeyer** | 310 SOB<br>Annapolis 21401<br>841-3671 | 2590 Pfefferdorn Rd.<br>West Friendship 21794<br>988-9818 | **14** | Montgomery County | Finance | 4 |
| **Delegate Joel Chasnoff** | 226 HOB<br>Annapolis 21401<br>841-3200 | 17904 Georgia Ave.<br>Olney Bldg., Suite 210<br>Olney 20832<br>924-4200 | **14** | Montgomery County | Judiciary | 13 |
| **Senator Laurence Levitan** | 100 SOB<br>Annapolis 21401<br>841-3169 | 11426 Georgetowne Dr.<br>Potomac 20854<br>897-8282 | **15** | Montgomery County | Budget & Taxation | 16 |
| **Delegate Gene W. Counihan** | 111 HOB<br>Annapolis 21401<br>841-3521 | 9901 Dellcastle Rd.<br>Gaithersburg 20879<br>977-5045 | **15** | Montgomery County | Ways & Means | 5 |
| **Delegate Jean W. Roesser** | 220 HOB<br>Annapolis 21401<br>841-3090 | 10830 Fox Hunt Lane<br>Potomac 20854<br>299-9046 | **15** | Montgomery County | Constitutional & Administrative Law | 1 |
| **Delegate Judith Toth** | 225 HOB<br>Annapolis 21401<br>841-3037 | P.O. Box 130<br>Germantown 20874<br>428-3056 | **15** | Montgomery County | Environmental Matters | 13 |
| **Senator Howard A. Denis** | 402 SOB<br>Annapolis 21401<br>841-3124 | 7735 Old Georgetown Rd.<br>Suite 525<br>Bethesda 20814<br>858-3124 | **16** | Montgomery County | Judicial Proceedings | 10 |
| **Delegate Brian E. Frosh** | 220 HOB<br>Annapolis 21401<br>841-3090 | 4916 Greenway Dr.<br>Bethesda 20816<br>652-8555 | **16** | Montgomery County | Environmental Matters | 1 |
| **Delegate Gilbert J. Genn** | 224 HOB<br>Annapolis 21401<br>841-3011 | 10401 Grosvenor Pl. #222<br>North Bethesda 20852<br>530-0780 | **16** | Montgomery County | Judiciary | 1 |
| **Delegate Nancy K. Kopp** | 222 HOB<br>Annapolis 21401<br>841-3001 | 6301 Dahlonega Rd.<br>Bethesda 20816<br>229-0385 | **16** | Montgomery County | Appropriations | 13 |
| **Senator Frank Shore** | 306 SOB<br>Annapolis 21401<br>841-3134 | 306 Senate Office Bldg.<br>Annapolis 21401<br>841-3134 | **17** | Montgomery County | Economic & Environmental Affairs | 16 |
| **Delegate Mary Boergers** | 225 HOB<br>Annapolis 21401<br>841-3037 | 4417 Puller Dr.<br>Kensington 20895<br>564-0508 | **17** | Montgomery County | Ways & Means | 6 |
| **Delegate Jennie M. Forehand** | 223 HOB<br>Annapolis 21401<br>841-3028 | 712 Smallwood Road<br>Rockville 20850<br>764-4772 | **17** | Montgomery County | Appropriations | 9 |
| **Delegate Michael R. Gordon** | 222 HOB<br>Annapolis 21401<br>841-3001 | 416 Hungerford Dr.<br>Rockville 20850<br>294-2100 | **17** | Montgomery County | Constitutional & Administrative Law | 5 |
| **Senator Margaret C. Schweinhaut** | 304 SOB<br>Annapolis 21401<br>841-3137 | 3601 Saul Road<br>Kensington 20895<br>946-3111 | **18** | Montgomery County | Judicial Proceedings | 37 |
| **Delegate Donald B. Robertson** | 320 HOB<br>Annapolis 21401<br>841-3391 | 7003 Delaware St.<br>Chevy Chase 20815<br>657-8992 | **18** | Montgomery County | Constitutional & Administrative Law | 17 |
| **Delegate Patricia R. Sher** | 220 HOB<br>Annapolis 21401<br>841-3045 | 1916 Rookwood Rd.<br>Silver Spring 20910<br>589-7188 | **18** | Montgomery County | Economic Matters | 9 |
| **Delegate C. Lawrence Wiser** | 223 HOB<br>Annapolis 21401<br>841-3028 | 12702 Littleton St.<br>Silver Spring 20906<br>946-9486 | **18** | Montgomery County | Economic Matters | 11 |

| | Session Address | District Address | Legislative District | County or City | Committee | Years in Legislature |
|---|---|---|---|---|---|---|
| **Senator Idamae R. Garrott** | 208 SOB<br>Annapolis 21401<br>841-3151 | 13115 Estelle Road<br>Wheaton 20906<br>946-4879 | **19** | Montgomery County | Economic & Environmental Affairs | 7 |
| **Delegate Henry B. Heller** | 221 HOB<br>Annapolis 21401<br>841-3019 | 12706 Turkey Branch Parkway<br>Rockville 20853<br>949-9247 | **19** | Montgomery County | Ways & Means | 1 |
| **Delegate Carol S. Petzold** | 225 HOB<br>Annapolis 21401<br>841-3090 | 14113 Chadwick Lane<br>Rockville 20853<br>871-7413 | **19** | Montgomery County | Constitutional & Administrative Law | 1 |
| **Delegate Leonard H. Teitelbaum** | 224 HOB<br>Annapolis 21401<br>841-3090 | 11805 Auth Lane<br>Silver Spring 20902<br>593-7309 | **19** | Montgomery County | Environmental Matters | 1 |
| **Senator Ida G. Ruben** | 204 SOB<br>Annapolis 21401<br>841-3634 | 11 Schindler Court<br>Silver Spring 20903<br>439-2332 | **20** | Montgomery County | Budget & Taxation | 12 |
| **Delegate Dana Lee Dembrow** | 224 HOB<br>Annapolis 21401<br>841-3011 | 8601 Manchester Rd.<br>Silver Spring 20901<br>565-0118 | **20** | Montgomery County | Constitutional & Administrative Law | 1 |
| **Delegate Peter Franchot** | 223 HOB<br>Annapolis 21401<br>841-3028 | 7111 Sycamore Ave.<br>Takoma Park 20912<br>270-8417 | **20** | Montgomery County | Appropriations | 1 |
| **Delegate Sheila Hixson** | 221 HOB<br>Annapolis 21401<br>841-3019 | 1008 Broadmore Circle<br>Silver Spring 20904<br>384-4739 | **20** | Montgomery County | Ways & Means | 11 |
| **Senator Thomas M. Yeager** | 404 SOB<br>Annapolis 21401<br>841-3572 | 413 Main Street<br>Laurel 20707<br>498-3400 | **13** | Prince George's County | Judicial Proceedings | 4 |
| **Delegate William C. Bevan** | 219 HOB<br>Annapolis 21401<br>841-3205 | 8143 Aspen Wood Way<br>Jessup 20794<br>725-8459 | **13** | Prince George's County | Constitutional & Administrative Law | 5 |
| **Delegate Susan R. Buswell** | 219 HOB<br>Annapolis 21401<br>841-3205 | 8017 Branch Wood Ct.<br>Ellicott City 21043<br>796-5386 | **13** | Prince George's County | Appropriations | 5 |
| **Senator Arthur Dorman** | 303 SOB<br>Annapolis 21401<br>841-3141 | 303 Senate Office Bldg.<br>Annapolis 21401<br>434-7700 | **21** | Prince George's County | Economic & Environmental Affairs | 22 |
| **Delegate Timothy F. Maloney** | 424 HOB<br>Annapolis 21401<br>841-3315 | P.O. Box 255<br>Beltsville 20705<br>841-3114 | **21** | Prince George's County | Appropriations | 9 |
| **Delegate Pauline H. Menes** | 210 HOB<br>Annapolis 21401<br>841-3114 | 3517 Marlbrough Way<br>College Park 20740<br>935-6270 | **21** | Prince George's County | Judiciary | 21 |
| **Delegate James C. Rosapepe** | 210 HOB<br>Annapolis 21401<br>841-3114 | 8403 Patuxent Ave.<br>College Park 20740<br>441-8690 | **21** | Prince George's County | Ways & Means | 1 |
| **Senator Thomas P. O'Reilly** | PW SOB<br>Annapolis 21401<br>841-3155 | 7525 Greenway Center Dr.<br>Suite 312<br>Greenbelt 20770<br>345-6900 | **22** | Prince George's County | Finance | 13 |

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|---|---|---|---|---|---|---|
| **Delegate Anne Mackinnon** | 207 HOB<br>Annapolis 21401<br>841-3058 | 6306 67th Street<br>Riverdale 20737<br>459-5307 | **22** | Prince George's County | Constitutional & Administrative Law | 1 |
| **Delegate Richard A. Palumbo** | 207 HOB<br>Annapolis 21401<br>841-3058 | 4004 St. Barnabas Rd.<br>Suitland 20746<br>423-8300 | **22** | Prince George's County | Judiciary | 9 |
| **Delegate Paul G. Pinsky** | 207 HOB<br>Annapolis 21401<br>841-3058 | 6205 Inwood St.<br>Cheverly 20785<br>858-3058 | **22** | Prince George's County | Environmental Matters | 1 |
| **Senator Leo E. Green** | 212 SOB<br>Annapolis 21401<br>841-3631 | 3123 Belair Dr.<br>Bowie 20715<br>464-8777 | **23** | Prince George's County | Finance | 9 |
| **Delegate Mary A. Conroy** | 208 HOB<br>Annapolis 21401<br>841-3098 | 208 HOB<br>Annapolis 21401<br>858-3098 | **23** | Prince George's County | Ways & Means | 1 |
| **Delegate Joan Pitkin** | 208 HOB<br>Annapolis 21401<br>841-3098 | 12005 Long Ridge Lane<br>Bowie 20715<br>262-0538 | **23** | Prince George's County | Environmental Matters | 9 |
| **Delegate Charles J. Ryan** | 131 HOB<br>Annapolis 21401<br>841-3407 | 208 HOB<br>Annapolis 21401<br>262-5659 | **23** | Prince George's County | Appropriations | 9 |
| **Senator Decatur W. Trotter** | 313 SOB<br>Annapolis 21401<br>841-3148 | P.O. Box 1460<br>Landover 20785<br>277-7500 | **24** | Prince George's County | Budget & Taxation | 8 |
| **Delegate Nathaniel Exum** | 204 HOB<br>Annapolis 21401<br>841-3065 | 5611 Landover Rd.<br>Hyattsville 20784<br>277-7501 | **24** | Prince George's County | Economic Matters | 13 |
| **Delegate Francis J. Santangelo, Sr.** | 204 HOB<br>Annapolis 21401<br>841-3065 | 5611 Landover Rd.<br>Hyattsville 20784<br>773-6225 | **24** | Prince George's County | Economic Matters | 16 |
| **Delegate Sylvania W. Woods, Jr.** | 204 HOB<br>Annapolis 21401<br>841-3065 | 5611 Landover Rd.<br>Hyattsville 20784<br>277-7503 | **24** | Prince George's County | Constitutional & Administrative Law | 9 |
| **Senator Albert R. Wynn** | 302 SOB<br>Annapolis 21401<br>841-3127 | 8700 Central Ave.<br>Suite 306<br>Landover 20785<br>350-5055 | **25** | Prince George's County | Judicial Proceedings | 4 |
| **Delegate Ulysses Currie** | 203 HOB<br>Annapolis 21401<br>841-3076 | 7315 Calder Drive<br>Capitol Heights 20743<br>350-3345 | **25** | Prince George's County | Ways & Means | 1 |
| **Delegate Dennis C. Donaldson** | 201 HOB<br>Annapolis 21401<br>841-3076 | 6108 Old Silver Hill Rd.<br>District Heights 20747<br>336-5525 | **25** | Prince George's County | Ways & Means | 9 |
| **Delegate Juanita Miller** | 203 HOB<br>Annapolis 21401<br>841-3076 | 6108 Old Silver Hill Rd.<br>District Heights 20747<br>420-7050 | **25** | Prince George's County | Economic Matters | 1 |
| **Senator Frank J. Komenda** | 402 SOB<br>Annapolis 21401<br>841-3092 | 402 SOB<br>Annapolis 21401<br>459-9426 | **26** | Prince George's County | Budget & Taxation | 12 |
| **Delegate Rosa Lee Blumenthal** | 205 HOB<br>Annapolis 21401<br>841-3012 | 519 Barrymore Dr.<br>Oxon Hill 20745<br>839-3329 | **26** | Prince George's County | Judiciary | 1 |

| | Session Address | District Address | Legislative District | County or City | Committee | Years in Legislature |
|---|---|---|---|---|---|---|
| **Delegate Christine M. Jones** | 205 HOB<br>Annapolis 21401<br>841-3012 | 6505 Old Branch Ave.<br>Camp Springs 20748<br>449-3500 | **26** | Prince George's County | Economic Matters | 5 |
| **Delegate Gloria Lawlah** | 205 HOB<br>Annapolis 21401<br>841-3519 | 3801 24th Ave.<br>Hillcrest Heights 20748<br>894-3197 | **26** | Prince George's County | Constitutional & Administrative Law | 1 |
| **Senator Thomas V. Mike Miller, Jr.** | H107 State House<br>Annapolis 21401<br>841-3700 | P.O. Box 219<br>Clinton 20735<br>868-6931 | **27** | Prince George's County | President of the Senate | 13 |
| **Delegate Gary R. Alexander** | 206 HOB<br>Annapolis 21401<br>841-3083 | Alexander & Cleaver<br>Suite 307<br>Ft. Washington 20744<br>292-3300 | **27** | Prince George's County | Appropriations | 1 |
| **Delegate William R. McCaffrey** | 162 HOB<br>Annapolis 21401<br>841-3534 | 12405 Lytton Ave.<br>Brandywine 20613<br>372-6786 | **27** | Prince George's County | Environmental Matters | 13 |
| **Delegate Joseph F. Vallario, Jr.** | 206 HOB<br>Annapolis 21401<br>841-3083 | 5210 Auth Rd., 6th Flr.<br>Suitland 20746<br>423-8100 | **27** | Prince George's County | Judiciary | 13 |
| **Senator Charles H. Smelser** | 130 SOB<br>Annapolis 21401<br>841-3704 | 100 SOB<br>Annapolis 21401<br>848-2770 | **4** | Carroll | Budget & Taxation | 32 |
| **Delegate Donald B. Elliott** | 209 HOB<br>Annapolis 21401<br>841-3107 | 204 Lambert Ave.<br>Box 370<br>875-4026 | **4** | Carroll | Environmental Matters | 1 |
| **Senator Raymond E. Beck** | 410 SOB<br>Annapolis 21401<br>841-3683 | 189 E. Main St.<br>Westminster 21157<br>848-4460 | **5** | Carroll | Budget & Taxation | 15 |
| **Delegate Richard N. Dixon** | 306 HOB<br>Annapolis 21401<br>841-3371 | 1224 Western Chapel Rd.<br>New Windsor 21776<br>547-5129 | **5** | Carroll | Appropriations | 5 |
| **Delegate Richard C. Matthews** | 306 HOB<br>Annapolis 21401<br>841-3371 | 1309 Taylor St.<br>Hampstead 21074<br>239-7600 | **5** | Carroll | Judiciary | 21 |
| **Delegate Lawrence A. LaMotte** | 306 HOB<br>Annapolis 21401<br>841-3371 | 2702 Melrose Avenue<br>Woodstock 21163<br>461-5548 | **5** | Carroll | Environmental Matters | 5 |
| **Senator John W. Derr** | 408 SOB<br>Annapolis 21401<br>841-3575 | 13 W. Second St.<br>Frederick 21701<br>695-5733 | **3** | Frederick | Economic & Environmental Affairs | 4 |
| **Delegate James E. McClellan** | 324 HOB<br>Annapolis 21401<br>841-3240 | 215 Rockwell Terr.<br>Frederick 21701<br>662-3804 | **3** | Frederick | Appropriations | 9 |
| **Delegate Royd Smith** | 324 HOB<br>Annapolis 21401<br>841-3240 | P.O. Box 311<br>Frederick 21701<br>662-0977 | **3** | Frederick | Environmental Matters | 1 |

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| **Senator Charles Smelser** | 130 SOB<br>Annapolis 21401<br>841-3704 | 100 SOB<br>Annapolis 21401<br>848-2770 | **4** | Frederick | Budget & Taxation | 32 |
| **Delegate Thomas Hattery** | 209 HOB<br>Annapolis 21401<br>841-3107 | P.O. Box 88<br>Mount Airey 21771<br>694-0123 | **4** | Frederick | Ways & Means | 5 |
| **Delegate George H. Littrell, Jr.** | 209 HOB<br>Annapolis 21401<br>841-3107 | 5209 Reel's Mill Rd.<br>Frederick 21701<br>662-4367 | **4** | Frederick | Economic Matters | 5 |
| **Senator Charles H. Smelser** | 130 SOB<br>Annapolis 21401<br>841-3704 | 100 SOB<br>Annapolis 21401<br>848-2770 | **4** | Howard County | Budget & Taxation | 32 |
| **Delegate Donald B. Elliott** | 306 HOB<br>Annapolis 21401<br>841-3704 | 204 Lambert Ave.<br>Box 370<br>New Windsor 21776<br>875-4026 | **4** | Howard County | Environmental Matters | 1 |
| **Senator Thomas M. Yeager** | 404 SOB<br>Annapolis 21401<br>841-3572 | 413 Main Street<br>Laurel 20707<br>498-3400 | **13** | Howard County | Judicial Proceedings | 4 |
| **Delegate Virginia M. Thomas** | 219 HOB<br>Annapolis 21401<br>841-3205 | 6153 Forty Winks Way<br>Columbia 21045<br>730-0485 | **13** | Howard County | Environmental Matters | 5 |
| **Delegate William C. Bevan** | 219 HOB<br>Annapolis 21401<br>841-3205 | 8143 Aspen Wood Way<br>Jessup 20794<br>725-8459 | **13** | Howard County | Constitutional & Administrative Law | 5 |
| **Delegate Susan R. Buswell** | 219 HOB<br>Annapolis 21401<br>841-3205 | 8017 Branch Wood Ct.<br>Ellicott City 21043<br>796-5386 | **13** | Howard County | Appropriations | 5 |
| **Senator Edward J. Kasemeyer** | 310 SOB<br>Annapolis 21401<br>841-3671 | 12400 Clarksville Pike<br>Clarksville 21029<br>988-9818 | **14** | Howard County | Finance | 4 |
| **Delegate Robert L. Flanagan** | 226 HOB<br>Annapolis 21401<br>841-3200 | 12400 Rt. 108<br>Clarksville 21029<br>988-9818 | **14** | Howard County | Judiciary | 1 |
| **Delegate Robert H. Kittleman** | 312 HOB<br>Annapolis 21401<br>841-3401 | 12400 Rt. 108<br>Clarksville 21029<br>988-9818 | **14** | Howard County | Economic Matters | 5 |
| **Senator Catherine I. Riley** | PW SOB<br>Annapolis 21401<br>841-3158 | 20 Office Street<br>Bel Air 21014<br>838-7010 | **34** | Harford County | Finance | 12 |
| **Delegate William H. Cox, Jr.** | 326 HOB<br>Annapolis 21401<br>841-3289 | 141 N. Main St.<br>Bel Air 21014<br>879-9173 | **34** | Harford County | Ways & Means | 17 |
| **Delegate Barbara Kreamer** | 326 HOB<br>Annapolis 21401<br>841-3289 | 100 Curtis St.<br>Aberdeen 21001<br>575-7034 | **34** | Harford County | Constitutional & Administrative Law | 5 |
| **Delegate Eileen M. Rehrmann** | 326 HOB<br>Annapolis 21401<br>841-3289 | 103 N. Main St.<br>Bel Air 21014<br>879-4797 | **34** | Harford County | Appropriations | 5 |

| | Session Address | District Address | Legislative District | County or City | Committee | Years in Legislature |
|---|---|---|---|---|---|---|
| **Senator William H. Amoss** | 307 SOB<br>Annapolis 21401<br>841-3603 | 2303 Bel Air Rd.<br>P.O. Box 496<br>Fallston 21047<br>838-7555 | **35** | Cecil, Harford Counties | Budget & Taxation | 12 |
| **Delegate William A. Clark** | 326 HOB<br>Annapolis 21401<br>841-3289 | 2523 Bradfield Ave.<br>Bel Air 21014<br>838-9433 | **35** | Harford County | Environmental Matters | 5 |
| **Delegate Joseph V. Lutz** | 151 HOB<br>Annapolis 21401<br>841-3289 | 1604 Churchville Rd.<br>Bel Air 21014<br>838-0900 | **35** | Harford County | Economic Matters | 4 |
| **Delegate Ethel Murray** | 403 HOB<br>Annapolis 21401<br>841-3444 | 100 S. Queen St.<br>P.O. Box 603<br>Rising Sun 21911<br>398-8558 | **35** | Cecil County | Economic Matters | 5 |
| **Senator Walter M. Baker** | 301 SOB<br>Annapolis 21401<br>841-3639 | 153 East Main St.<br>Elkton 21921<br>398-3536 | **36** | Caroline, Cecil, Kent, Queen Anne, Talbot | Judicial Proceedings | 9 |
| **Delegate John M. Ashley** | 405 HOB<br>Annapolis 21401<br>841-3410 | Rt. 1, Box 249-0<br>Centerville 21617<br>758-0178 | **36** | Queen Anne | Appropriations | 5 |
| **Delegate Ronald A. Guns** | 404 HOB<br>Annapolis 21401<br>841-3442 | 80 Fifth Avenue<br>Elkton 21921<br>392-4422 | **36** | Cecil | Environmental Matters | 5 |
| **Delegate R. Clayton Mitchell, Jr.** | H100 State House<br>Annapolis 21401<br>841-3800 | H100 State House<br>Annapolis 21401<br>841-3800 | **36** | Kent | Speaker of the House | 17 |
| **Senator Frederick C. Malkus** | P.W. SOB<br>Annapolis 21401<br>841-3590 | 500 Spring Street<br>P.O. Box 316<br>Cambridge 21613<br>228-1911 | **37** | Caroline, Dorchester, Talbot, Wicomico | Economic & Environmental Affairs | 41 |
| **Delegate Richard F. Colburn** | 414 HOB<br>Annapolis 21401<br>841-3429 | 4731 Egypt Road<br>Cambridge 21613<br>228-0437 | **37** | Dorchester | Evironmental Matters | 5 |
| **Delegate William S. Horne** | 121 HOB<br>Annapolis 21401<br>841-3425 | Rm. 223/Stewart Bldg.<br>P.O. Box 204<br>Easton 21601<br>822-0470 | **37** | Talbot | Judiciary | 14 |
| **Delegate Samuel Q. Johnson, III** | 415 HOB<br>Annapolis 21401<br>841-3427 | P.O. Box 200<br>Hebron 21830<br>546-2400 | **37** | Wicomico | Environmental Matters | 5 |
| **Senator Lewis R. Riley** | 409 SOB<br>Annapolis 21401<br>841-3645 | Box 130<br>Parsonsburg 21849<br>742-3999 | **38** | Somerset, Wicomico, Worcester | Finance | 8 |
| **Delegate Norman H. Conway** | 416 HOB<br>Annapolis 21401<br>841-3401 | 1312 Whitter Dr.<br>Salisbury 21801<br>896-4177 | **38** | Wicomico | Ways & Means | 1 |
| **Delegate Daniel M. Long** | 412 HOB<br>Annapolis 21401<br>841-3433 | Box 220<br>Westover 21871<br>957-2323 | **38** | Somerset | Ways & Means | 5 |
| **Delegate Mark O. Pilchard** | 413 HOB<br>Annapolis 21401<br>841-3431 | RFD #3, Box 100<br>Pocomoke 21851<br>632-0473 | **38** | Worcester | Appropriations | 17 |

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|---|---|---|---|---|---|---|
| **Senator James Simpson** | 316 SOB<br>Annapolis 21401<br>841-3616 | P.O. Box 888<br>Waldorf 20601<br>645-2235 | **28** | Charles, St. Mary's | Finance | 13 |
| **Delegate Samuel C. Linton** | 216 HOB<br>Annapolis 21401<br>841-3247 | Box 110<br>Holly Springs Rd.<br>Nanjemoy 20662<br>246-4922 | **28** | Charles | Appropriations | 13 |
| **Delegate Michael J. Sprague** | 216 HOB<br>Annapolis 21401<br>841-3247 | P.O. Box 37<br>Byrans Road 20616<br>375-7995 | **28** | Charles | Ways & Means | 13 |
| **Delegate John F. Wood, Jr.** | 216 HOB<br>Annapolis 21401<br>841-3247 | Rt. 6<br>Mechanicsville 20659<br>884-3233 | **28** | Charles, St. Mary's | Economic Matters | 1 |
| **Senator Bernie Fowler** | 210 SOB<br>Annapolis 21401<br>841-3673 | P.O. Box 288<br>Prince Frederick 20678<br>535-3366 | **29** | Anne Arundel, Calvert, St. Mary's | Budget & Taxation | 5 |
| **Delegate Thomas A. Rymer** | 161 HOB<br>Annapolis 21401<br>841-3231 | Box 1700<br>Prince Frederick 20678<br>535-1070 | **29** | Anne Arundel, Calvert | Environmental Matters | 17 |
| **Delegate J. Ernest Bell, II** | 217 HOB<br>Annapolis 21401<br>841-3314 | 10 Court House Dr.<br>Leonardtown 20650<br>475-2380 | **29** | Calvert, St. Mary's | Judiciary | 5 |
| **Delegate John F. Slade, III** | 217 HOB<br>Annapolis 21401<br>841-3314 | P.O. Box 15<br>Valley Lee 20692<br>475-5150 | **29** | St. Mary's | Environmental Matters | 5 |
| **Senator Gerald W. Winegrad** | 401 SOB<br>Annapolis 21401<br>841-3578 | 401 SOB<br>Annapolis 21401<br>841-3578 | **30** | Anne Arundel | Economic & Environmental Affairs | 5 |
| **Delegate John C. Astle** | 212 HOB<br>Annapolis 21401<br>841-3209 | 212 HOB<br>Annapolis 21401<br>841-3209 | **30** | Anne Arundel | Appropriations | 5 |
| **Delegate Michael E. Busch** | 212 HOB<br>Annapolis 21401<br>841-3211 | 212 HOB<br>Annapolis 21401<br>263-8829 | **30** | Anne Arundel | Judiciary | 1 |
| **Delegate Donald E. Lamb** | 212 HOB<br>Annapolis 21401<br>841-3209 | 1003 Mount Holly Dr.<br>Annapolis 21401<br>974-0582 | **30** | Anne Arundel | Constitutional & Administrative Law | 1 |
| **Senator Philip C. Jimeno** | 305 SOB<br>Annapolis 21401<br>841-3658 | 833 Matthews Ave.<br>Baltimore 21225<br>636-4134 | **31** | Anne Arundel | Judicial Proceedings | 7 |
| **Delegate W. Ray Huff** | 213 HOB<br>Annapolis 21401<br>841-3217 | 8349 Ritchie Hwy.<br>Pasadena 21122<br>647-1111 | **31** | Anne Arundel | Constitutional & Administrative Law | 1 |
| **Delegate Charles W. Kolodziejski** | 213 HOB<br>Annapolis 21401<br>841-3217 | 168 Carvel Beach Rd.<br>Baltimore 21226<br>255-5188 | **31** | Anne Arundel | Economic Matters | 4 |
| **Delegate John Leopold** | 213 HOB<br>Annapolis 21401<br>841-3206 | 3623 Chadwick Ct.<br>Pasadena 21122<br>255-4477 | **31** | Anne Arundel | Economic Matters | 5 |

| | Session Address | District Address | Legislative District | County or City | Committee | Years in Legislature |
|---|---|---|---|---|---|---|
| **Senator Michael J. Wagner** | 209 SOB<br>Annapolis 21401<br>841-3593 | Arundle Center North<br>Room 510<br>101 Crain Hwy., N.W.<br>Glen Burnie 21061<br>760-6453 | **32** | Anne Arundel | Finance | 7 |
| **Delegate Tyras S. Athey** | 111 HOB<br>Annapolis 21401<br>841-3469 | 100 HOB<br>Annapolis 21401<br>841-3469 | **32** | Anne Arundel | Ways & Means | 22 |
| **Delegate Patrick C. Scannello** | 214 HOB<br>Annapolis 21401<br>841-3233 | 114 Vernon Avenue<br>Glen Burnie 21061<br>768-5678 | **32** | Anne Arundel | Economic Matters | 9 |
| **Delegate George T. Schmincke** | 214 HOB<br>Annapolis 21401<br>841-3233 | 108 Chalmers Ave.<br>Glen Burnie 21061<br>768-7773 | **32** | Anne Arundel | Environmental Matters | 9 |
| **Senator John A. Cade** | 407 SOB<br>Annapolis 21401<br>841-3568 | 407 SOB<br>Annapolis 21401<br>858-3568 | **33** | Anne Arundel | Budget & Taxation | 13 |
| **Delegate John Gary** | 215 HOB<br>Annapolis 21401<br>841-3223 | 215 HOB<br>Annapolis 21401<br>987-9007 | **33** | Anne Arundel | Appropriations | 5 |
| **Delegate Marsha G. Perry** | 215 HOB<br>Annapolis 21401<br>841-3223 | 1605 Edgerton Pl.<br>Crofton 21114<br>721-7034 | **34** | Anne Arundel | Constitutional & Administrative Law | 1 |
| **Delegate Elizabeth S. Smith** | 215 HOB<br>Annapolis 21401<br>841-3223 | 3438 Merrimac Rd.<br>Harbor Hills<br>Davidsonville 21035<br>956-4942 | **33** | Anne Arundel | Ways & Means | 13 |
| **Senator John N. Bambacus** | 406 SOB<br>Annapolis 21401<br>841-3565 | P.O. Box 1<br>Frostburg 21532<br>689-4666 | **1** | Allegany, Garrett Counties | Economic & Environmental Affairs | 5 |
| **Delegate George C. Edwards** | 411 HOB<br>Annapolis 21401<br>841-3435 | P.O. Box 8<br>Grantsville 21536<br>895-5720 | **1** | Allegany, Garrett Counties | Appropriations | 5 |
| **Delegate Kevin Kelly** | 319 HOB<br>Annapolis 21401<br>841-3454 | 201 Washington St.<br>Cumberland 21502<br>724-7000 | **1** | Allegany County | Judiciary | 1 |
| **Delegate Betty Workman** | 319 HOB<br>Annapolis 21401<br>841-3462 | 65 LaVale Court<br>LaVale 21502<br>729-2691 | **1** | Allegeny County | Constitutional & Administrative Law | 1 |
| **Senator Victor Cushwa** | 309 SOB<br>Annapolis 21401<br>841-3609 | P.O. Box 608<br>Hagerstown 21741<br>791-2900 | **2** | Allegany, Washington Counties | Finance | 10 |
| **Delegate Casper R. Taylor** | 151 HOB<br>Annapolis 21401<br>841-3519 | 501 N. Mechanic St.<br>Cumberland 21502<br>724-9234 | **2** | Allegany, Washington Counties | Economic Matters | 13 |
| **Delegate Peter G. Callas** | 423 HOB<br>Annapolis 21401<br>841-3449 | 35 Day View Drive<br>Hagerstown 21740<br>739-0212 | **2** | Washington | Constitutional & Administrative Law | 5 |
| **Delegate Donald F. Munson** | 422 HOB<br>Annapolis 21401<br>841-3447 | 28 West Church St.<br>Hagerstown 21740<br>791-4511 | **2** | Washington | Economic Matters | 13 |

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| **Senator John W. Derr** | 408 SOB<br>Annapolis 21401<br>841-3575 | 13 West Second St.<br>Frederick 21701<br>695-5733 | 3 | Washington | Economic & Environmental Affairs | 4 |
| **Delegate Bruce Poole** | 319 HOB<br>Annapolis 21401<br>841-3240 | Rt. 9, Box 357<br>Hagerstown 21740<br>790-2203 | 3 | Washington | Judiciary | 1 |
| **Delegate James E. McClellan** | 324 HOB<br>Annapolis 21401<br>841-3240 | 215 Rockwell Terrace<br>Frederick 21701<br>662-3804 | 3 | Washington | Appropriations | 9 |
| **Delegate Royd Smith** | 324 HOB<br>Annapolis 21401<br>841-3240 | P.O. Box 311<br>Frederick 21701<br>662-0977 | 3 | Washington | Environmental Matters | 1 |

# Component Medical Societies

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|---|---|
| Sikander L. Sandhir MD, President<br>Allegany County | Peg Cunningham, Exec. Secretary<br>Allegany County<br>(777-1150) |
| Jorge B. Ramirez MD, President<br>Anne Arundel County | Mrs. Peggy Colt, Exec. Secretary<br>Anne Arundel County<br>(544-0312) |
| Jose M. Yosuico MD, President<br>Baltimore City | Ms. Bernadette Lane, Exec. Director<br>Baltimore City<br>(625-0022) |
| Bernard Kleiman MD, President<br>Baltimore County | Mrs. Neilson Andrews, Exec. Director<br>Baltimore County<br>(252-1212) |
| Modesto S. Rivera MD, President<br>Calvert County | (535-4000) |
| Christian Jensen MD, President<br>Caroline County | (479-2605) |
| Martin J. Weintraub MD, President<br>Carroll County | Bernice Ecker, Exec. Director<br>Carroll County<br>(848-1350) |
| Henry J. Farkas MD, President<br>Cecil County | Linda Wegman, Exec. Secretary<br>Cecil County<br>(398-4000) |
| G. Shankar Rath MD, President<br>Charles County | (645-8322) |
| Michael A. Moskewicz MD, President<br>Dorchester County | (228-1325) |

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|---|---|
| Casper E. Cline MD, President<br>Frederick County | Mrs. Judy Ann Leishear, Exec. Secretary<br>Frederick County<br>(698-3458) |
| Robert A. Goralski MD, President<br>Garrett County | (334-8171) |
| Robert L. Smith MD, President<br>Harford County | Suzie McHugh, Exec. Secretary<br>Harford County<br>(879-3666) |
| Allan T. Leffler, II, MD, President<br>Howard County | Kim Davis, Exec. Secretary<br>Howard County<br>(740-7690) |
| Wayne D. Benjamin MD, President<br>Kent County | (778-0300) |
| Ira N. Brecher MD, President<br>Montgomery County | K. Edward Shanbacker, Exec. Director<br>Montgomery County<br>(921-4300) |
| John Richard Lilly MD, President<br>Prince George's County | Clifford Gilbert, Exec. Director<br>Prince George's County<br>(459-1920) |
| John R. Smith, Jr, MD, President<br>Queen Anne's County | (758-1363) |
| N. K. Laheri MD, President<br>St. Mary's County | (475-5527) |
| Ritchie C. Shoemaker MD, President<br>Somerset County | (957-1550) |
| Barney M. Davis, Jr., MD, President<br>Talbot County | (822-0310) |
| Francisco Japzon MD, President<br>Washington County | Mrs. Ann Mazingo, Executive Secretary<br>Washington County<br>(824-8751) |
| John A. Bartkovich MD, President<br>Wicomico County | Mary Ann Dunn, Executive Secretary<br>Wicomico County<br>(742-5909) |
| Federico G. Arthes MD, President<br>Worcester County | (641-2600) |
| Marcel Salive MD, President<br>Resident Component | Kathy Krizan, Executive Secretary<br>Resident Component<br>(539-0872) |
| William E. Venanzi, Jr., MD, President<br>Student Component | Kathy Krizan, Executive Secretary<br>Student Component<br>(539-0872) |

# Lobbying the Legislature: A Practitioner's Guide

*GERARD E. EVANS, ESQUIRE*

**The art of skillful lobbying is largely communication tempered with tact, diplomacy, and most importantly, common sense. The job of the physician lobbyist is to make the most of those precious few moments when a legislator's attention is focused on the issues of the medical profession.**

Mr. Evans is Director of Government Relations of the Medical and Chirurgical Faculty of the State of Maryland.

Members of the General Assembly are bombarded daily with countless pieces of correspondence and hounded endlessly by dozens of lobbyists vying for their time and attention. There is simply not enough time in the day for any legislator to read and digest all the information received. It follows then, that when the opportunity to present information to a legislator occurs, whether it is in person or before a committee, the opportunity must be maximized.

During the course of the 1987 Maryland General Assembly 2,668 bills were introduced for consideration by the legislature. The sheer numbers alone preclude an in-depth analysis of each bill by every legislator. For this reason, legislators rely on various mechanisms for receiving input about legislation.

The first and certainly the most beneficial filtering mechanism is the standing committee system. The six committees of the House of Delegates and the four committees of the Senate review and pass judgment on legislation assigned to their respective jurisdiction by the President of the Senate and the Speaker of the House. With few exceptions, the judgment of a particular committee about a particular piece of legislation determines the ultimate fate of the legislation. The members of the General Assembly give much deference to the committee study and determination. Consequently, great trust is placed in the committee system.

Another source of information legislators rely on is legislative agents or lobbyists. Lobbyists more often than not work within the committee system. However, because legislators sit on only one standing committee they do not always receive all information about legislation not considered by their particular committee. Gaps in information often can be filled by lobbyists. Members of the public also supply legislators with information about matters before the General Assembly and can be a quite potent lobbying force.

The great majority of members of the Legislature can be persuaded about a legislative issue by an issue-oriented approach to a lobbying campaign. Very few Delegates and Senators are predisposed toward an idea before it is drafted and introduced as legislation. However there are exceptions to this rule. The reaction of some legislators can be predicted by analysis of activities such as past voting history, involvement with component and specialty societies, and general political background.

The fact that legislators are generally issue oriented does not mean that pure politics does not have a legitimate role to play in the formation and execution of an effective lobbying effort. But the role of politics must be appropriate. The short- or long-range ramifications of a particular legislator's actions or inactions should be a facet of the lobbying program. These ramifications should be discussed and understood by both the lobbying effort and the legislator. The mobilized political force of an interest group can demonstrate to a legislator the genuine concern and depth of commitment a group has toward an issue. Concern and commitment should be directed at the issue itself and what it represents to medicine rather than toward a legislator personally. We have nothing to gain and everything to lose by waging personal attacks and battles against members of the General Assembly.

## A Lobbying Program

In the interest of organization, the following suggested lobbying program is divided into three subcategories, each addressing an important factor in the lobbying equation. It is called an equation because each element is interrelated, and the desired effort cannot be achieved without equal attention to each subcategory. These are the major elements of a successful lobbying effort:

**The Presenter: The task of presenting testimony to a committee or speaking in person to a member of the legislature must be undertaken by the right person.**

A medical organization should take ample time in choosing the best person for the presentation. The physician/presenter can make a lasting impact on the consideration of an issue, either positive or negative. When making a presentation, in the eyes of the legislator, the physician represents all physicians whether or not the physician actually occupies a position within a medical society.

Common sense dictates there are certain physical attributes necessary for the most appropriate presenter. However, attention to every detail will make the difference between success and failure in Annapolis.

The presenter should have the requisite speaking

voice. A person with a high-pitched nasal resonance could have a difficult time communicating. Such a voice could be distracting or perhaps irritating. An entire message or presentation could be lost if given by the wrong person. Legislators cannot understand what they cannot hear, and therefore it is essential to speak slowly with a loud, clear voice.

Physicians, because of their stature in the community, are generally afforded some degree of credibility as witnesses. Legislators are genuinely impressed when physicians take time off from their demanding practices to volunteer time in Annapolis to speak on issues of concern. It is even more powerful for legislators to see and hear from physicians from their own district. Physicians are vital members of the community, and legislators generally appreciate their reaction to matters of concern in the local legislative district. They believe physicians have a valuable perception of events and issues in the community. Therefore, the most effective presenter is the physician who has a real interest in the matter under consideration. Legislators can quickly assess the relative interest of presenters. They know whether a presenter is merely reciting a text or speaking from interest and concern.

Similarly, questioning legislators can quickly probe the depth of a physician's preparation on a given issue through poignant interrogations. For these reasons it may be preferable for the physician/presenter to be in a specialty or to occupy a position bearing some direct relationship to the matter being presented. For example, a pediatrician may not be the most appropriate presenter to speak on mandated medicare assignment because, in all likelihood, such a practitioner would rarely (if ever) see a medicare patient. Likewise a neurosurgeon may not be involved enough in pediatric inoculations to act as the right spokesperson on Health Department Regulations affecting DPT vaccines. The best physician spokesperson is the one involved in the matter under consideration and sufficiently versed about the public policy and the medical aspects of the issue to communicate effectively to a nonmedically oriented audience.

Local component medical societies and specialty medical societies are well aware of the attributes of their members and are excellent in matching the appropriate physician/presenter to the issue presentation at hand. They should be used as a resource whenever possible.

**The Presentation: The presentation element of the equation examines the style and substance of offering positions and issues before the members of the General Assembly.**

A threshold question needs to be examined in order to properly prepare the presentation. Does the audience need to be informed or persuaded, or do they need a combination of these things? Each presentation should be tailored to the audience being addressed.

Likewise, if the lobbying is conducted on a one-to-one basis, the individual legislator's background should be reviewed to determine the most appropriate course of action in presenting an issue to him or her. The most productive course of action would include relating a particular issue to the legislator's concerns. Legislators are interested in the individual physician's perspective, but a presentation has more relevance and is more powerful if the topic is described in terms that bring the situation home to the legislator. The broader the appeal, the more likely an issue will catch the attention and concern of the legislator.

Relate the issue using ancedotes of real-life incidents that occurred to citizens in the legislator's district. Make the legislator understand that the problem you address is a problem for the people of his or her legislative district.

To further evaluate the legislator, the presenter should ask what the issue under consideration has in common with the legislator and his or her constituency. Most issues of concern to physicians can be presented so as to have relevance to patients; these patients are the constituents of the elected representative. The presenter needs to gear the presentation to aspects that will concern the average citizen. Presenting an issue in this light is much more likely to catch the attention (and, consequently, concern) of the legislator.

Next, the presentation should incorporate any recent events that may affect the perspective of the legislator. What information needs to be presented to explain the recent media stories or reports? It is important not to be apologetic or defensive if medicine has been criticized in the reported events but rather to offer reasonable explanations for critical questions if you have such answers. It is not uncommon to see the press biased against the interests of physicians. The media often views physicians with an unsympathetic perspective. In dealing with the press remember that anything you say can and may be used against you in a newspaper story.

Be prepared to see anything you say to a reporter on the front page of the *Washington Post* in block headlines. Many a naive physician has been used by the press to slant a story in a predetermined way.

The presentation should include not more than two or three key messages designed to make an impression on the legislator. The messages should be based on what you need to tell the legislator to persuade him or her about a given issue. Remember that legislators simply cannot retain everything they hear, so repeat the key messages several times in different words throughout the presentation. People rarely recognize points are being repeated or reinforced in a speech.

Again, your primary goal is to convince and inform legislators; to do that the presenter must prove how the issue being presented affects the lives of the legislators and their constituents. This means emphasizing aspects of the issue that touch their lives.

We recommend that you prepare a speech or at least an outline when preparing for a committee appearance. If you use a speech, give at least 30 copies to the committee secretary a half hour before the hearing. Remember, **all** witnesses must "sign in" before the hearing begins in order to testify. No one will be allowed to testify if they have not placed their name on the sign-in sheet.

Organize your speech carefully. Most committees allow five minutes for a witness to make a presentation, and some chairmen will cut you off after the alloted time has elapsed whether or not you are finished. The preset time does not include the question-and-answer period, which can continue long past the initial prepared speech.

In organizing your presentation, develop opening remarks that will establish a common bond with your audience. In this way you can capture the legislators' attention. One particularly effective method mentioned earlier is referring to personal experiences using a compelling fact or statistic. Do not open your presentation with a joke unless you are very good. Make sure your opening contains a clear statement of position, for example, "I am here today to testify in favor of HB 1." Tell the legislators what you are going to cover and why you are going to cover it. In the interest of time, keep your opening short.

To the opening, attach a smooth transition phrase that will bring the presentation directly to the problem or issue at hand. Next, outline why the issue relates to the legislation in question and again inform the legislators how the problem affects your patients, their constituents. Persuade them that your position on the issue will result in benefits to your patients. Legislators are not particularly concerned about how individual physicians are affected; rather they are much more concerned with a broader constituency.

Do not overburden the legislators with facts and statistics. Include in your presentation only those facts necessary to relate your message. Information and facts from impartial third parties usually are received well. The sentences you employ should be brief, using colorful language. Stay away from medical jargon or technical terms: your scientific knowledge generally will not impress the legislators and may alienate them. Do not try to explain every aspect of the issue because you will run out of time and you will fragment your presentation.

I cannot overemphasize the importance of keeping a calm, even disposition throughout your presentation. Never threaten, frighten, or try to intimidate members of the legislature. The legislators need to be reassured by you that the physicians of Maryland are working in partnership with them to solve common problems and to achieve common goals.

If at all possible, try to maintain eye contact with the legislators. If this is distracting, it is best to focus your attention on the Chairman and the Vice-Chairman of the committee before which you are appearing.

In practicing for your presentation, do not memorize your speech; use an outline. Memorization puts far too much pressure on you, and the slightest slip may throw your entire delivery off. If you tend to gesture when you speak, then by all means gesture naturally. If you do not gesture, do not try to add this to your presentation, it will look awkward. A minor point, although one that has created problems in Annapolis, is not to staple your outline or speech (it will look awkward when you turn the pages) but rather to move the pages from side to side as you finish them.

Perhaps the most important aspect of your presentation before any legislative committee or before any individual legislator is the question-and-answer period. Effectively done, the question-and-answer time can provide legislators with great amounts of information and allow you the opportunity to engage in actual dialogue. Never be intimidated by questions from legislators. They are genuinely interested in the topic and are generally seeking information about the issue before them. Consider each question an opportunity to provide more information and to make additional points to the legislators. Beside providing additional information while addressing specific points, it is important that you answer the question asked during the course of your response.

If you find the question takes you off guard and you need a few seconds to collect your thoughts, try to use the following stall techniques. One response that may be useful in this case is "I am glad you asked that question, Delegate Smith, because it is a very important one," or "Let me put my thoughts together properly

because you have asked an important question that I can best answer in this way." The following is a generally used structure in answering a question.

- Restate the question in your own words.
- Give a statement of position.
- Support your position with appropriate evidence.
- Move from the evidence to a key message.
- End on a positive note.

If you perceive the legislator is hostile, don't repeat inflammatory words used by the questioner. It is also important not to patronize the legislator by answering with phrases such as "As I said in my speech." An alternative response could be "I am glad to have the opportunity to reinforce an important point." Again, don't evade the question with a rambling, nonsensical answer just to make a response. Don't ever be embarrassed to answer a question with "I don't know Delegate Smith. I will get back to you with an answer as soon as I possibly can." This is much safer than trying to finesse an answer. If you are ever asked personal questions about individual physicians or patients, merely tell the legislator you would be happy to discuss individuals with him or her privately.

If you have never testified in Annapolis, it is a good idea to visit the Capitol before your presentation. In this way you can familiarize yourself with the travel to Annapolis. Parking is always at a premium and therefore, extra time should be allowed in your estimated schedule.

Even more important is the need to acquaint yourself with the environment of testifying in a committee hearing room. Some find the room arrangement intimidating as the legislators' chairs and the witness table are placed to focus the full attention of each committee member directly at the testimony table. By acquainting yourself with the room size, seating arrangements, and general layout prior to your testimony some of the uncertainty surrounding the event will be eliminated. Comprehensive planning is essential in carrying out an informative, impressive appearance in Annapolis.

## The Process

The entire legislative session takes place in a span of 90 calendar days, beginning the second Tuesday in January. It is essential to understand and appreciate the legislative puzzle in order to know how your particular piece fits into the greater picture.

**The legislative process is a labyrinth of stringent rules, regulations, and protocol. Traditions play a major role in guiding the work of the General Assembly; some have not changed over the two hundred year history of the Legislature.**

Regardless of how pressing an issue is or how desperately a solution is needed, nothing can happen legislatively without the sponsorship of a bill by a Senator or a Delegate. Even the Governor himself must display his legislative agenda items to members of the General Assembly and request them to sponsor the legislation. Generally, the President of the Senate and the Speaker of the House will sponsor the Governor's legislative package out of courtesy, but they are not required to.

Books have been written about the mechanics of the legislative process, and space does not permit an in-depth dissertation. However, a brief sketch of the flow of legislation and certain aspects of the informal process should be reviewed. A thorough understanding of the informal process is more useful than knowing the intimate details of bill drafting or *Robert's Rules of Order*.

A piece of legislation or bill, as it is commonly called, starts out as an idea. Ideas or programs are drafted into the necessary legal form, assigned a bill number, and read across the desk of the presiding officer of the house in which the sponsor sits. As it is read across the desk, the bill is assigned to an appropriate committee for review, hearing, and discussion. Assignment of each bill to a committee is solely within the discretion of the Speaker of the House and the President of the Senate. However, within broad parameters one can usually predict which committee will deal with certain pieces of legislation.

Once a bill has been assigned to a committee, the committee chairman may appoint a subcommittee to study the bill, schedule the bill for a public hearing, or simply hold the bill until other like bills reach the committee for consideration. In this way, a committee may consider a group of bills that deal with similar subjects in one hearing. As a derivative power of the Speaker and the President, the Chairmen of committees have broad discretion in deciding the course of the legislation assigned to their committee.

Once a bill has been voted on in committee it is reported to the floor of the chamber of origination. The report of the committee most often determines the fate of the legislation. Rarely does a bill that received an

unfavorable report ever become law. Conversely, a bill with a favorable report from a committee's deliberation stands an excellent chance for passage. A bill can be amended at any time along this process, although most amendments occur at the committee level.

Once a bill passes second reader and is printed for third reader, no amendments may be presented in the chamber of its origin. The third reader vote is actually a vote on the final passage of a bill. To pass, a bill must receive a majority vote of the membership of the chamber. After a bill passes favorably from the house of origin, the bill travels across the hall to the other elected chamber. At that time the bill goes through roughly the same legislative process. One major difference is that bills of opposite chambers may be amended in either the second or third reader form.

If the House and Senate cannot agree on the course of action for a bill, the President and Speaker may appoint a conference committee. Generally, the representatives of the President and the Speaker on the conference committee have great discretion and latitude in determining the fate of bills assigned to the conference committee. Many times the decision of the legislative conferees will direct the rest of the legislators.

Many times the legislative process will seem cumbersome and awkward. However, it is essential to follow a bill through each stage. Even after a bill has passed both houses, legislation can be vetoed by the Governor. For these and myriad other reasons the pressure in lobbying a particular piece of legislation can never ease until it is signed into law by the Governor.

## Summary

The members of the Maryland General Assembly are as diverse as the citizens of Maryland. Each elected representative holds, in the power of his or her vote, the future of the medical profession in this state. As each year passes, the legislature enmeshes itself deeper and deeper into the regulation of the healing arts, and there is no end in sight. No longer do the legislators take as fact everything physicians enunciate. No longer do they comply with each legislative request as a matter of course.

Since 1799 the Medical and Chirurgical Faculty of Maryland has been charged with preserving the highest standards of health care for the citizens of this state. With that charge comes an equally solemn duty to monitor the changes in the practice of medicine, to help promote change when change is necessary, and to defeat change when change is not in the best interest of medicine. The members of the Maryland Legislature have a direct and continuing effect on the manner and climate in which medicine is practiced. Only by getting to know their individual legislators and learning how best to lobby them individually and as a group, can physicians hope to meet the challenge facing medicine in the forthcoming legislative sessions. Entire baccalaureate curriculums are offered on lobbying, and it would be irresponsible to offer this article as the last word on the subject. It is, rather, for physicians and others interested in the medical profession, an initial exposition to the labyrinth of rules, regulations, and rituals surrounding the legislative process in Annapolis. To be comfortable and confident in Annapolis takes years of work. The face of medicine is changing rapidly, and in order to guarantee that the practice of medicine preserves an appropriate profile, each and every physician in Maryland must be prepared to join the fray.

A particular quote comes to mind when analyzing the state of physician participation in the legislative process. On July 4, 1776 at the signing of the Declaration of Independence, Benjamin Franklin remarked to John Hancock "We must indeed all hang together, or, most assuredly, we shall all hang separately."

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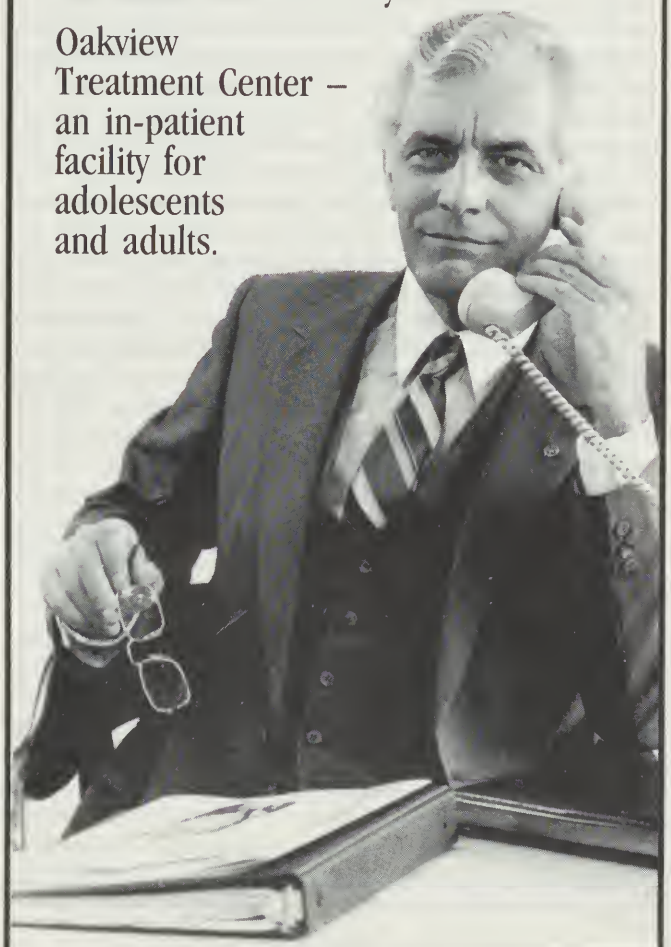
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# Malpractice in Maryland—The Legislative Outlook

*ISRAEL H. WEINER MD*

**Medical practice in Maryland, as in other parts of the country, has been changed profoundly by the explosion of professional negligence litigation over the past 13 years. In the view of physicians this change has had a corrosive effect on the practice of medicine, seriously interfering with their ability to provide optimal care.**

Dr. Weiner is Chairman of the Legislative Committee of the Medical and Chirurgical Faculty of Maryland.

Over the past 13 years, malpractice insurance premium rates for the higher risk specialties have risen over 30 percent per year, compounded annually. An equivalent general inflation rate over the same period would have resulted in political and social chaos in this country, and the ability of physicians to maintain any semblence of reasonable medical practice in the face of this enormous economic pressure is worthy of some pride on their part. Malpractice actions continue to be filed at an appalling rate. I estimate that approximately one of every three Maryland physicians currently is defending himself or herself in a malpractice suit, and average awards have also increased year by year.

This escalation of litigation has resulted in two problems for medicine. Most obvious is the sharply increasing premium cost for higher risk specialties. This increase has reached levels some doctors simply could not afford and has resulted in terminations of practice, causing isolated (but growing) access problems across the state, particularly in Obstetrics. A second and more serious problem has been the development of "defensive medicine" as the primary method of coping with the pervasive threat of malpractice accusation.

Defensive medicine includes not only excessive testing, consultations, procedures, and resulting costs but also a change in the behavior of physicians toward patients. A fear now prevails that every patient encounter can lead to an adversary action in court. Thus, physicians are driven to view patients as potential adversaries, certainly not the best basis for a caring and sensitive doctor/patient relationship. Excessive preoccupation with informed consent considerations is leading to patients' rejection of desirable and necessary procedures. Patients are being denied potentially beneficial new procedures because of the doctor's perception of excessive legal risk.

The cost problem has attracted the most attention, but I believe it is the less important of the two problems. Society must provide an environment where medical decisions can be made objectively and honestly; defensive medicine intrusion can only degrade the quality of medical care.

## Cause of the Problem

There is no general agreement as to the basic cause of the malpractice problem. The insurance industry has been labeled the culprit, but I do not believe this can be justified. Insurance premium rates certainly reflect the severity of the problem but are a result rather than a cause. Insurance companies, pressured by overseas reinsurers and falling interest rates on invested reserves, have been forced to raise rates sharply in order to remain solvent. It should not be considered an indictment of the insurance industry to recognize that it can offer lower rates during periods of higher investment return and must raise rates when investment return falls. We have heard much about this "insurance cycle" in the last few years, but it is a strange cycle that only cycles upward and only affects negligence liability.

In Maryland, the predominant supplier of malpractice insurance is the Medical Mutual Liability Insurance Society. The mutual character of this company obviates any serious accusation of profiteering; the strongest accusation that can be made is that of excessive conservatism. If future events prove the present premiums to have indeed been unwarranted, the excessive profits will not flow into the pockets of gleeful stockholders, but will be returned to the policyholders who paid those premiums. In addition, if present rates yield unconscionable windfall profits, as the trial attorneys and their allied consumer groups claim, one must wonder about the almost complete absence of any competition to Med Mutual in the Maryland scene. I have a healthy cynicism about insurance companies: if there were an easy profit to be made in malpractice insurance, the for-profit companies would not be conspicuous by their absence.

Insurance rates are a result of the problem, not its cause.

## Doctors at Fault?

It is alleged frequently that the basic problem is lack of competence in the medical profession and deficiency in peer review and disciplinary activity. The facts belie this allegation. Never in the history of American medicine and nowhere else in the world have doctors been subject to more scrutiny, review, and oversight. The performance of American doctors has never been higher. Physicians are more highly trained and medical procedures more sophisticated and effective than ever before. Indeed, the most competent doctors and prestigious medical centers are no strangers to malpractice litigation. Increased and more efficient peer review is certainly a goal worth pursuing, but it will not signifi-

cantly affect the malpractice problem.

The basic cause of the malpractice explosion lies in the nature of medicine itself. Medicine deals with a predamaged population and with disabilities that become the entire responsibility of the doctor when malpractice is alleged. These serious disabilities (such as pain, paralysis, and loss of vision) are viewed by juries as justifying virtually unlimited dollar awards. In addition, medicine is an inexact science, with each patient encounter requiring a complex series of decisions, any one of which can be retrospectively challenged as a basis for an allegation of malpractice. Thus doctor error has become equated with malpractice and has led to a standard of perfect care in judicial practice, rather than the standard of ordinary care desired by judicial theory.

What we have proved over the past ten years is that the present system is economically unfeasible. What doctors deal with on a day-to-day basis is simply too dear to indemnify. The system that values a paraplegia in the few thousands of dollars when it is prevented or relieved, values the same paraplegia in the millions when it is "proved" to result from intervention or failure to intervene. The predictable result is that paraplegia will become an unacceptable risk for doctors to attempt to deal with. Economics will triumph over medicine.

In addition, the tort system functions best in situations in which the parties have had no pre-existing relationship. When such a relationship does exist, it cannot help being increasingly distorted by the increasing perception of the threat of tort action.

## Is There A Solution?

There have been many suggestions for change by a wide variety of interested persons. The most superficial approaches are attempts to modify insurance mechanisms in an effort to improve accessibility and affordability of malpractice insurance. These include schemes to lower premiums to high-risk specialties by raising the premium rates to lower-risk doctors, to establish excess awards funds, and to place arbitrary freezes on premiums by insurance regulation. These measures are economically unsound and, at best, temporary stopgaps.

A more basic approach is tort reform. Such measures as modification of the collateral source rule, mandated structured settlements and periodic payments, caps on awards, and other alterations of tort law are being offered as methods of preserving fair compensation while reducing dollar costs. Such measures, some of which have been adopted in Maryland, have been the most practical approach to date. Nevertheless, the potential dollar savings fade when compared to the 30 percent annual inflation in premium rates that have occurred and that show no signs of leveling off. We should remember that tort reform originated in the insurance industry and is designed to make the malpractice problem more manageable from the insurance standpoint. It cannot solve the problem from the medical practice standpoint.

Ultimately society will have to face the issue that effective, sympathetic medical care is not possible in the context of the present tort system. Medicine will require some sort of immunity from malpractice accusation, complete or limited, if excellence in medical practice is to be restored.

There is ample precedent for such immunity. Judges, for example, cannot be sued for judicial negligence. A judge who releases an accused criminal on bond cannot be held liable if the person commits murder after his release. A psychiatrist is, of course, not so protected in the clearly analagous situation of the release of a psychiatric patient from custody. Another example that readily comes to mind is the immunity that covers legislators. Several years ago, the Maryland Legislature lowered the legal age for drinking to 18 years, and the result was a sharp increase in motor vehicle deaths among teenagers. The change was promptly reversed, but no legislator was sued for what was obviously a serious error in legislative judgment. It seems clear that society recognizes some vital societal functions cannot be maintained in the face of tort threat. Judges could not judge, and legislators could not legislate if they were not immune from suit. The function of physicians in society is no less important or delicate.

A limited immunity could take the form of a higher standard of proof in malpractice cases, perhaps a clear and convincing standard to replace the present preponderance of evidence. There are other areas of law in which a similar standard is required. Adoption of a more stringent standard of proof implies a presumption of correctness of the action in dispute. Recall that physicians are already examined and licensed as competent by the State. It does not seem unreasonable to assume the physician at the scene and at the time acted correctly and that a clear and convincing case be required to prove that he or she did not.

Another possibility is limiting medical malpractice to some statutory gross negligence definition. This would encompass physician behavior that is reckless and in conscious disregard for patient safety. This concept more closely fits our intuitive definition of malpractice than does the present vaguely applied standard. Doctors who operate under the influence of alcohol or drugs or who attempt procedures beyond their experience should be sued. Doctors who are doing what they are trained to do, in a sincere effort to help a patient, should not be sued. Doctors must be free to make decisions in an atmosphere of objectivity and compassion rather than

one of adversity and fear.

These proposals represent a revolutionary change in the approach to the malpractice problem. We have no illusions that such recommendations will be immediately acceptable to the legal profession. The crisis will continue to worsen, however, and medical practice can no longer be treated like automobile driving. The treatment of sick and injured human beings is something special, and the special nature of medicine must be recognized before the malpractice problem can be solved.

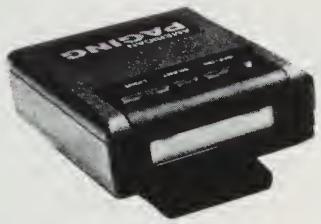

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**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

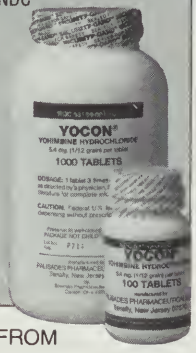
**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.




**References:**


1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.


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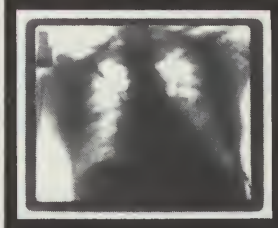

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†See Warnings and Precautions.

*Please see brief summary of prescribing information on the next page.*

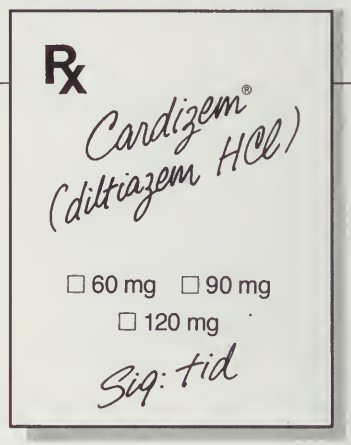
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*Usual maintenance dosage range: 180-360 mg/day*




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*Professional Use Information*

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***CONTRAINDICATIONS***
*CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).*

***WARNINGS***

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   *Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.*
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

***PRECAUTIONS***
***General.*** *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

***Drug Interaction.*** *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

*Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.*

***Carcinogenesis, Mutagenesis, Impairment of Fertility.*** *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

***Pregnancy.*** *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

*There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.*

***Nursing Mothers.*** *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

***Pediatric Use.*** *Safety and effectiveness in children have not been established.*

***ADVERSE REACTIONS***
*Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.*

*In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.*

*The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):*

| | |
|---|---|
| *Cardiovascular:* | *Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.* |
| *Nervous System:* | *Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.* |
| *Gastrointestinal:* | *Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.* |
| *Dermatologic:* | *Petechiae, pruritus, photosensitivity, urticaria.* |
| *Other:* | *Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.* |

*The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.*

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# State Mandated Medicare Assignment

*J. LEONARD LICHTENFELD MD*

**Mandated assignment legislation comes at a time when physicians are faced with increased scrutiny by Medicare-contracted professional review organizations. They also must deal with a DRG-based philosophy of shortening acute care hospital stays as much as possible. Mandated assignment threatens to place even more pressure on providers, especially those involved in primary care who depend on out-patient visits and cognitive services as primary sources of revenue.**

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In April 1986, Massachusetts became the first state to require physicians to accept the Medicare reasonable charge as payment in full for all services provided Medicare beneficiaries. The Medicare Balance Billing law (frequently called "Mandatory Assignment") also linked compliance with medical licensures raising the specter that issues other than the competence of the practitioner may dictate whether a physician can continue to practice medicine.[1]

Subsequently many states, including Maryland, introduced legislation with similar intent. Mandatory assignment became law in three other states besides Massachusetts. In Maryland, the bill failed in committee, but it is certain to be reintroduced in the current legislative session.

From a consumer's viewpoint, the legislation has broad appeal. Health care costs continue to escalate, and (so the argument goes) if mandatory assignment were the rule there would be considerable savings for Medicare beneficiaries. Further, the passage of this legislation would force all doctors to accept assignment and to become "participating physicians," theoretically increasing the affordability and access to health care.

Representatives of senior citizen groups indicate that nothing less than 100 percent assignment is acceptable. However, as a group, senior citizens have the largest amount of disposable income compared with other segments of the population.[2] They refuse to consider means testing as a compromise to ensure those who are truly needy benefit from any possible legislation.

## The Legislation

The Massachusetts legislation, formally designated Chapter 475 of the Acts of 1985, requires Massachusetts physicians to accept Medicare's reasonable charge as payment in full. Failure to comply would result in action taken against the physician that could jeopardize the physician's license and right to practice medicine. The law is compulsory, involving all services, and makes no distinction regarding the income or resources of the patient. Thus, wealthy and poor patients are treated equally.

Several court challenges have been initiated as a defense against the legislation, citing the intrusion of state government into a federally mandated program. The Supreme Court has decided not to review the case, and the law remains in effect.

It is important to note that Massachusetts previously prohibited balanced billing on Blue Shield, Medical Assistance, or Worker's Compensation. Forty eight percent of the physicians in the state were participating in the Medicare program and accepting Medicare assignment 100 percent of the time. Because of these precedents, the situation in Massachusetts was considerably different than that existing in Maryland, and it became difficult for legislators to resist mandatory assignment.

Hard evidence regarding the impact of the legislation remains elusive although various anecdotes have been provided. Articles describing the hardships facing Massachusetts physicians have appeared prominently.[3] The Massachusetts Medical Society recently made public pronouncements advising physicians of the difficulties in that state and suggesting they seek to practice elsewhere. It may take several years until the real impact is felt, reflecting the time it takes to make decisions regarding alterations in practice patterns, early retirement, or where a new physician will start a practice.

Vermont has passed legislation prohibiting physicians from billing a patient more than the reasonable charge allowed by Medicare. A means test is applied, in that the beneficiary is not subject to the legislation if he or she is taxed on Social Security or Railroad Retirement benefits. Office and home visits are excluded, recognizing the increased cost of providing primary care services. Additional regulations apply, but of note is the requirement that physicians must prepare claims forms for beneficiaries. Penalties are not as onerous as under Massachusetts legislation, and there is no formal relationship to medical licensure.

The Connecticut legislation differs in that it is voluntary, with an escape clause where the state may mandate assignment if certain quotas are not met by 1988. Income limits are $19,950 for single individuals, and $24,000 for married couples. Established goals include 85 percent of claims taken on assignment, 85 percent of physicians participating in a courtesy card program, 80 percent of physicians in each of four designated specialties participating in the courtesy card program, and enrollment of 50,000 patients in the program. Civil penalties are levied if mandated legislation

takes effect because the preestablished goals are not met.

Rhode Island also has passed a similar proposal. In this state's legislation, physicians must accept assignment if a patient is eligible for the state's pharmacy assistance program, which establishes limits of $12,000 for an individual and $15,000 for a married couple. Penalties for violators are uncertain, and further study has been requested.

Legislation introduced in the Maryland House of Delegates in 1986 (Bill #892) was simple and to the point: "A physician who agrees to treat a Medicare beneficiary in this state may not charge the Medicare beneficiary any amount in excess of the charge for that service as determined by the United States Secretary of Health and Human Services." The proposed legislation made no distinction regarding income limits and benefits, and it mandated a fine not to exceed $5,000 or five years imprisonment or both for violators of the law. This bill was defeated in Committee, but undoubtedly will be submitted in some similar format in the forthcoming legislative session.

### Facts against Mandated Assignment

Mandated assignment legislation comes at a time when physicians are faced with increased scrutiny by Medicare-contracted professional review organizations (PROs). They also must deal with a DRG-based philosophy of shortening acute care hospital stays as much as possible. Mandated assignment threatens to place even more pressure on providers, especially those involved in primary care who depend on outpatient visits and cognitive services as primary sources of revenue.

Proponents of mandated assignment dismiss the substantial increases in the costs of the practice of medicine, such as malpractice, office rent, and employee expenses, which have escalated over the past several years in excess of the increases allowed by the Medicare program. They also fail to recognize the corresponding increase in frequency and intensity of outpatient procedures and primary care office activities resulting from the decreasing number of hospital admissions and lengths of stay. This shift in patterns of care puts greater burdens on primary care practices.

Several facts must be considered in assessing the need for this type of legislation:

1. Maryland Blue Cross/Blue Shield has indicated 85 percent of claims are submitted to this carrier as assigned claims, despite the low percentage of participating physicians in Maryland.[4] Consumers are confused regarding the meaning of participating and nonparticipating physicians, and many are not aware that nonparticipating physicians can (and do) accept assignment in many cases. Many doctors also accept Medicare allowances as payment in full in nonassigned cases. The percentage of claims accepted indicates physicians are acting responsibly, taking patient circumstances into account on a case-by-case basis.

2. The Health Care Finance Administration (HCFA) data indicates national assignment rates have increased significantly over the past five years from 52.2 percent of claims received in fiscal year 1981 to 68 percent of claims received in fiscal year 1986.[5] The covered charges on these claims is somewhat greater (52.9 percent and 69.5 percent respectively), consistent with the understanding that the greater the fee for a service, the more apt it is to be accepted on assignment by the physician.

3. The quality of care and access to care quite possibly will decrease if mandated assignment takes effect. Data compiled by the American Society of Internal Medicine suggests that limits on internists' fees may result in 27 percent of internists refusing to accept new Medicare patients, 52 percent of the physicians charging for services such as telephone calls (now generally provided at no cost), 44 percent of internists reducing time spent with Medicare patients, and 22 percent of internists increasing the frequency of visits for Medicare patients. Thirty three percent of internists indicated that they would either stop practicing medicine or retire early.[6] These measures would result in Medicare beneficiaries receiving a lower quality of care in a multitiered system with most physician resource time spent with those patients who bear a greater portion of the expense.

4. There will be considerable pressure to shift costs to other patient groups, notably working people and their spouses under age 65. The enactment of the MAAC legislation, which already caps the maximum amount a physician may charge a Medicare beneficiary, has resulted in dual fee schedules with non-Medicare patients paying more for the same service. Mandatory assignment will further exacerbate this differential resulting in significant increases in charges made to patients who pay the physicians' usual fee, particularly in the office setting.

5. Mandatory assignment will further emphasize the historic imbalance in reimbursement for cognitive and procedural services. Alterations in house staff training selections are occurring in internal medicine. Several nationally regarded programs did not reach a full complement of house staff this past year. One reason cited for this disturbing event was the perception that internists are not adequately reimbursed for their time or effort in providing primary care cognitive services.

6. According to the American Society of Internal Medicine, citing data from HCFA's Division of Infor-

mation and Analysis, Medicare beneficiaries' out-of-pocket expenses for unassigned claims are relatively modest.[7] Much of this expense relates to legislatively mandated copayments and deductibles in addition to other expenditures for supplemental health insurance premiums. In 1980, beneficiaries paid an average of $137 in copayment and deductibles. They paid $56 on average for physician charges above the Medicare approved amount. In 1986, the corresponding figures for copayments and deductibles were $265 and $93 for charges above the approved amounts.

Substantial out-of-pocket costs for supplemental health insurance also must be considered. There is no reason to believe these charges for Medigap policies will decrease since they are related to Medicare required copayments and deductibles that still must be paid if a claim is accepted on assignment.

7. Elderly patients face real dilemmas in meeting the cost of prescription drugs, nursing home care, and catastrophic illness. Currently, federal legislation is pending that addresses two of these issues; it is unlikely that a solution to the cost of nursing home care will be forthcoming soon, given the mood of fiscal restraint at the federal level.

8. The relationship between a patient and physician remains a contract entered into freely and individually, where each party remains responsible to the other. Mandatory assignment alters this contract, and the bond between patients and doctors may suffer the consequences.

## Medical Community Response to Mandated Assignment Legislation

How physicians respond to proposed mandated assignment legislation can influence whether such laws are enacted. Although vastly outnumbered by proponents of the legislation, almost every doctor would be affected. It is the responsibility of each practitioner to let his or her elected delegates and senators know the potential impact of this law on his/her practice. Many actions can be taken on an individual basis:

*Direct contact with legislators is the most effective effort.* Meeting in person with your delegates and senators is best; telephone and letter contacts are also helpful. As a group, doctors are generally reluctant to press their cause. *No one can replace a doctor* in explaining the current problems with Medicare reimbursement or how mandatory assignment would change the quality and access of care provided Medicare beneficiaries. The costs of providing care are significant. Senior citizens complain about the "excess" *gross* incomes of physicians but do not consider the high cost of maintaining a practice. Doctors know the true figures.

*Individual practice policies regarding Medicare assignment must be easily and generally available to patients.* Patients' questions and concerns must be addressed directly so there are no misunderstandings or surprises; there must be a sympathetic ear to those truly in need. Failure to respond to patients' needs is poor practice. It is improper to refuse an itemized statement for submission to Medicare on unassigned cases until the charge is paid in full. Physicians may not bill the difference between the customary charge and the approved amount when assignment is accepted. Seniors are particularly concerned that many physicians have not posted signs indicating their policy on Medicare assignment as required by state law.

*Senior citizens and consumer advocates need to provide their constituency with the information needed to make intelligent decisions regarding their options.* Information is available regarding physician participating or nonparticipating status. Guides have been published that list the charges physicians make for common procedures. Seniors must realize they have the right to seek care from whomever they wish, and their decision may be based on many factors, including whether a doctor accepts Medicare assignment. They must discuss their preference and their problems with their physician. For too long, questions of this nature have been avoided by physicians and patients alike. Consumer education is a very important part of the health care system.

*Physicians must continue to act as advocates for their patients in an increasingly technical and impersonal health care system.* It is this advocacy that is so important to the patient-physician relationship and may suffer the most if mandatory assignment is enacted.

*Physicians must be knowledgeable regarding the issues.* They must become educated and be willing to speak out in support of their positions. The recently announced increase in Part B premiums was an opportunity for many in Congress to make statements bearing no relationship to the facts as to why the increase was so substantial. Much of the increase was outside the control of physicians, since our fees had been frozen for the previous three years. Critics of physicians did not recognize the burden of increasing the number of practitioners participating in the Part B program; they failed to recognize the costs of shifting patient care from the hospital to the doctor's office. The medical community must reply responsibly when confronted with similar allegations.

## Conclusion

Both patients and physicians are confronting the failed expectations of the Medicare program. The fed-

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eral government continues to seek ways of reducing Medicare expenditures in the face of large budget deficits. Medical care today is increasingly sophisticated and expensive. More elderly beneficiaries are living longer and more productive lives. More sophisticated procedures are available for them in their later years. All of us must be willing to bear the expense if we do not want to make decisions limiting the use of dialysis, intensive care units, cancer chemotherapy, coronary catheterization, and bypass and angioplasty procedures, for example. Otherwise, the burden will be shifted unfairly and unwisely to the shoulders of others.

Every effort must be made to assure that the Medicare program remains equitable to all involved, providers and patients alike. Mandatory assignment unfairly singles out providers as the basis for correcting the problems of the Medicare program and its beneficiaries.

### Acknowledgment

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# The Importance of Physician-Patient Communication in Reducing Medical Liability

*CARMINE M. VALENTE PhD, ALBERT M. ANTLITZ MD, MARLYN D. BOYD PhD, and ANGELO J. TROISI MHA*

**The issue of professional liability poses a critical problem for the medical profession and the public. The costs of buying protection and the growing threat of suits are of great concern. Our approach to medical liability looks beyond tort and judicial reforms, defense coordination, and quality review into the area of physician-patient communication.**

Dr. Valente is Executive Director, Dr. Antlitz is Board Chairman, and Dr. Boyd is affiliated with the Center for Health Education, Inc. Mr. Troisi is Executive Director, Medical and Chirurgical Faculty of the State of Maryland.

In 1986 the Medical Mutual Liability Insurance Society of Maryland (Medical Mutual)[1] reported paying $29.7 million in claims payments on behalf of physician policyholders. For those claims closed with payment, average indemnity to claimants stood at

$185,185 in 1986
$139,787 in 1985
$128,242 in 1984
$81,730 in 1982

In 1985, the American Medical Association designed a plan to alleviate the crisis developing in medical professional liability.[2] The plan suggests ways to reduce the number of liability suits and to redesign the existing system for resolving claims. These areas were targeted: (1) education and community action; (2) legislation to achieve state and federal tort and judicial reforms; (3) defense coordination for physicians being sued; and (4) expanded risk control and quality review programs to minimize causes of action. Admittedly, heaviest attention was directed to the enactment of a wide array of tort and judicial reforms that would ease the liability burden for physicians and hospitals and discourage suites without merit.

Looking beyond legal solutions, we address the problem via the role of communication in reducing liability and strategies for improving physician-patient communication and decreasing medical liability.

What has contributed to the medical liability crisis? Why has the physician-patient relationship become a potential plaintiff-defendant relationship? Medical Mutual's 1986 Annual Report* on the "Art of Doctoring"[1] provides some insight. The report claims

> changes in the delivery of health care have challenged the very foundation of the relationship between doctors and patients. The current crisis in medical malpractice is, more than anything, a crisis of trust. In a society that is constantly on the move, and in an era of increasing medical specialization, patients do not have time to develop lasting, trusting relationships with primary physicians. And physicians who have watched many of their peers-other good doctors-struggle through the trauma of a lawsuit are more and more hesistant to trust their patients.
>
> Those who have pointed fingers at doctors, blaming bad medicine for the malpractice crisis, are finally realizing that it does not always take bad medicine to make a malpractice suit, but it often does take anger on the part of the patient. When physicians and patients approach each other with suspicion, an important therapeutic interaction is lost, and patients, as well as doctors suffer.

The report also claims

> doctors have had to change their style, and often place of practice in order to meet the complex, contradictory, and sometimes frustrating demands of the "health care marketplace." Increasingly, doctors, trained to practice medicine and not to compete in the world of business, are finding that individual practice may be impractical.
>
> And while patients are wondering what happened to the "good old doctor," doctors are wondering what happened to the "good old patient." Many patients now seem to be consumers, demanding not only individualized and humane care, but also low cost, convenience, and perfect results. Physicians find themselves caught up in a storm of expectations through which they must single-handedly navigate in order to achieve and maintain quality patient care.

Technological breakthroughs in diagnosis and treatment of many diseases, is another facet identified in Medical Mutual's report.

> The doctor's challenge today is to balance scientific solutions to the treatment of disease processes with humane and caring approaches to the treatment of human illness. The number of nonmeritorious lawsuits filed against physicians—especially those physicians in the more technical specialties and those in which highly invasive procedures are part of everyday practice—indicate that patients are not satisfied with the answers that science alone offers. Yet the realities of modern medicine are such that physicians can no longer pack all the essential tools of their practice into a little black bag. More centralized and more specialized health care is inevitable, and can be better medicine. However, even practicing the best medicine will not guarantee that a doctor will not be sued.
>
> Physicians who are not sued may not necessarily be the best doctors, but they do share certain characteristics. They place value on knowing each patient as a person; they understand that healing is only possible when the patient is a partner in the process; and they listen.

## Prevalence of Malpractice Liability and the Role of Communication

According to a March 1986 report in *Medical Economics*[3] one out of every four physicians will be sued

* Reprinted with permission from the 1986 Annual Report of the Medical Mutual Liability Insurance Society of Maryland.

sometime in his or her career.[4] Speciality areas such as neurosurgery, cardiovascular surgery, orthopedics, and anesthesiology are at particularly high risk. Other specialists however, are not immune from liability suits. For example, internal medicine, the largest single specialty insured by Medical Mutual, accounts for 8.2 percent of total claims and 5.4 percent of total paid indemnity.[5] One area of significance for internal medicine is the type of outcome occasioning claims. Compared to other medical specialties, internal medicine differs in that 45 percent of the claims are triggered by the death of the patient. Although in many cases the patient's condition was the primary contributing factor in the cause of death, the family or the patients themselves indicated the condition was allowed to reach a crisis stage before definitive medical treatment was rendered. Failure to communicate the reasons for specific treatments, choice of treatment settings, and transfer to another facility often resulted in anxiety and anger of the patient and the families. Notably, the major risk factors associated with claims against internists related to some aspect of communication between physician and patient:[5]

- Failure or breakdown in physician-patient communication
- Inadequate history and physical exam
- Poor medical record documentation
  - Absence of written treatment plan
  - Inadequate description of clinical problems
  - Failure to specify and document medication dosages and possible side effects
- Lack of or inadequate **informed consent** regarding plan of treatment, alternatives, and potential risks and complications
- Delay in consultation

Among all specialties, obstetricians are first in frequency of claims. According to the American College of Obstetricians and Gynecologists, 60 percent of all obstetricians in the United States have been sued. Of these, 20 percent have been sued three or more times.[6] In Maryland, Medical Mutual reported that obstetricians accounted for 15.6 percent of all claims and 25.7 percent of total paid indemnity.[5] For a significant number of obstetric-related incidents the outcomes were attributed to the patient's condition. In some incidents, mothers with documented alcohol, drug, or tobacco use during pregnancy or failure to adhere to dietary restrictions went to encounter problems at delivery.[7] A detailed review of the factors relating to pregnancy outcome and the role of the physician in reducing the mother's risk can be found in the November 1987 issue of the *Maryland Medical Journal*.[8]

As early as 1973, 37 percent of malpractice suits in the United States were the result of poor communication between physician and patient. It was the single most common cause of such suits.[9] Clearly, the quality of the physician-patient relationship is the most important factor in decreasing medical liability.[10] Through an analysis of malpractice cases, Robertson[11] has identified eight major areas that lead to high-risk litigation; the breakdown of physician-patient communication is one of these areas.

Other common communication problems leading to medical liability include:[12]

- Patients perceive the physician as generally uncaring
- Patients perceive they have not been clearly informed
- The physician-patient relationship has not been a good one
- Patients perceive the physician is not sincerely remorseful for any negative outcome

### Improving Physician-Patient Communication

Many of these guidelines (Table) may seem obvious, but all of them are documented by research. You may be surprised by how well these guidelines work with patients.

*Focus comments on the patient, not the disease*[12] Being treated as a condition or disease entity is dehumanizing. Opening comments such as "How's the heart today," versus "How have *you* been feeling, any problems with *your* heart?" can make a difference in how patients view their physician.

*Avoid use of medical jargon.*[13,14] Even common physiological and anatomical terms are meaningless to some patients. For example, use "heart attack" and "stroke" rather than "myocardial infarction" and "cerebral hemorrhage." Using analogies is one good way of helping conceptualize abstractions: "hardened arteries are like old stiff radiator hoses."

*Use open-ended questions.*[15] Posed in a nonthreatening manner, a series of open-ended questions can be useful. For example, "Tell me about the medicine that you take." "How did you take it?"

*Avoid a businesslike approach.*[16] Patients reporting their physician had a business-like relationship rather than a personal relationship with them were less likely to be compliant with physician advice. Avoid talking about the patient in the third person, "When cases like these," talking across a desk, and refraining from personal, caring statements and facial expressions.

*Develop and maintain communication at the patient's level of vocabulary and cognitive abilities.*[17] Physicians often assume the patient is more knowledgeable than he or she really is and use inappropriate language. Again, keep vocabulary simple and basic, expressing yourself in terms the patient can understand.

*Provide the patient with reassurance and positive feedback.*[18,19] This may give the patient a heightened sense of self-esteem and satisfaction. Telling a patient

**Table. Guidelines for Improving Physician-Patient Communication and Decreasing Liability**

- Focus comments on the patient, not the disease
- Avoid use of medical jargon
- Use open-ended questions
- Avoid a businesslike approach
- Communicate at the patient's level of understanding
- Provide the patient with reassurance and positive feedback
- Use social statements and questions to establish rapport
- Clearly state your expectations of the patient
- Avoid threatening the patient's self-esteem or sense of control
- Summarize pertinent information
- Give the patient a sense of accomplishment or satisfaction
- Provide the patient with support for the task to be done
- Communicate caring and concern through nonverbal channels
- Follow-up on broken appointments
- Take all threats of litigation seriously
- Keep accurate and complete records
- Use a variety of methods to get information across to patients
- Discuss diagnosis, treatment, and prognosis with family members

how pleased you are that he or she has lost weight and that you are confident that he/she will continue to lose weight can make or break a dieting effort.

*Use social statements and questions to establish rapport.*[13] A short discussion of other subjects besides the medical history can go a long way in helping you get to know the patient. The patient will be impressed with the care you take in inquiring about more than the immediate problem.

*Clearly state your expectations of the patient.*[19,20] Offer instructions that clarify what you expect and give suggestions as to how the patient can accomplish them. For example, "I expect you to cut down on the amount of sodium (salt) you use on your food," and "Do not salt food at the table."

*Avoid threatening the patient's self-esteem or sense of control when questioning.*[21] It is important to be accepting and matter-of-fact in questioning patients. Enabling patients to feel comfortable in discussing problems with you is also important. For example, "Many people find it difficult to take medicines. Do you ever miss or forget to take your pills?" If the answer is yes, ask how often doses are missed and why.

*Summarize information.*[20] Office visits can be brief and it may seem to the physician that there isn't all that much to remember. However, the information is all new to your patients. They may be frightened, confused, angry, or concerned that they have a medical problem. Patients are also often intimidated when they are in a physician's office. Do not let them leave without repeating your main message.

*Give the patient a sense of accomplishment or satisfaction.*[20] For many patients following medical advice is not always easy. It is important to let patients know they are doing a good job. For example a simple statement from you, "I know it's been difficult, but I am pleased with your progress, keep up the good work," can be very helpful.

*Give the patient psychological support for the task to be done.*[20] Just as it is important to praise tasks well done, it is equally important to let your patient know that you have confidence in his or her ability to perform a task. You might say, "Stopping smoking may not be easy, but I know you can do it if you only try."

*Communicate caring and concern through nonverbal channels.* Sitting during conversations with the patient,[13] maintaining frequent eye contact,[21] and leaning toward the patient[16] demonstrate your interest in communicating and signals the patient that you are listening. Avoiding distracting mannerisms[13] such as doodling or tapping reassures the patient that you are taking his or her problem seriously.

*Follow-up on broken appointments.*[19] Be aware of patients whose attendance is erratic or who may have dropped out of treatment entirely. Make the next appointment before the patient leaves the office and immediately follow up missed appointments by phone to set up another time. This has been shown to affect drop-out rates. It may surprise physicians that 50 percent of hypertensive patients under traditional treatment conditions drop out during the first year of treatment and an additional 25 percent drop out during the next four years.

*Take all threats of litigation seriously.* Obviously, prevention and early detection of problems is the best course of action. However, if a threat is made, you might be wise to schedule a conference with the patient.[22] A calm, open, frank discussion should be carried out. You should also report the matter to your liability carrier.[17]

*Keep accurate and complete records*[12,23] *not only of physical findings, lab work, and so forth but also of information given and patient response.* "A systematic, detailed, uniform, and continuous record of each patient's treatment and progress is a crucial element of good medical care. A complete medical record protects the hospital and the physician if the patient does poorly and a suit is instituted." Keeping a copy of the exact instructions you gave to the patient will serve as a reminder for you of what material you covered and will emphasize their importance to the patient. A physician is on shaky ground if his or her defense, regarding documentation, is based on the following. "I counsel *all* my patients to. . . ." Information presented and recorded in the medical record must be individualized.

*Use a variety of methods to get information across to patients:*[14,20] *oral, written, audiovisual.* Using printed

materials with patients can foster feelings that physicians are too busy for them **or** that physicians are indeed involved and interested, depending on **how** the materials are used. The materials are more likely to be perceived as an adjunct to your oral instructions if they are well chosen for the patient in terms of reading level and subjects and are presented to the patient with discussion of at least part of the material. Printed materials can reinforce and augment verbal counseling. It can be comforting as well as instructive for patients to take away something from a physician's office that repeats, explains, or enlarges on information the physician has discussed. For example, "I know it may be difficult to remember all that I have said today. This brochure summarizes the major points. I'd particularly like you to read this section (point to it, mark it off, or circle it). Share it with your spouse and write down any questions that come up so we can discuss them next time."

*Discuss diagnosis, treatment, and prognosis with family members so they can reinforce your comments with the patient.*[24,25] Family support is important because the family expresses opinions that can encourage or inhibit treatment success, and some patients depend on family members to be responsible for their adherence to the treatment program.

The importance of physician-patient communication in reducing medical liability is echoed time and time again in publications and risk-management courses. The majority of complaints filed against physicians by patients include allegations of failure of communication. It comes as no surprise that many of the communication guidelines presented herein are a fundamental component of medical practice. While our emphasis has been on communication approaches that may impact on medical liability, many of the same approaches have been found also to effect patient satisfaction, compliance, doctor-shopping, and fee collection.[26]

## Acknowledgment

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# RESOLUTION ON PEER REVIEW

Adopted by the Council of the
Medical and Chirurgical Faculty of Maryland,
November 21, 1987

Whereas, Recent articles in the news media suggest that physician peer review in Maryland is failing to adequately protect Maryland citizens;

Whereas, The process of reviewing and disciplining physicians in Maryland involves multiple agencies including the DHMH Board of Medical Examiners, the Commission on Medical Discipline and the Medical and Chirurgical Faculty and its component medical societies;

Whereas, The Faculty is enhancing its almost 200 years of involvement in the peer review process by the development of a computerized system which the Faculty is operating for the State of Maryland to insure that hospitals, nursing homes and other physician practice settings are immediately notified of all investigations and disciplinary actions affecting individual physicians;

Whereas, The Faculty has received national recognition in the form of two grants from the Robert Wood Johnson Foundation to develop a model physician peer review protocol and to enhance communications between Maryland's physician disciplinary agencies and health care institutions;

Whereas, Physician members of the Medical and Chirurgical Faculty volunteer more than 16,000 man hours per year to the peer review process;

Whereas, The Faculty actively supports the establishment of the nationwide physician discipline data bank called for by the Omnibus Health Bill (PL 99-660) signed by President Reagan last year, and will share its unique experience and expertise in operating such a system within Maryland with the agencies which will implement the national data bank; and

Whereas, By act of the Maryland legislature in 1799, the Medical and Chirurgical Faculty was perpetually and irrevocably charged with the task of protecting the health of Maryland citizens; therefore, be it

Resolved, That the Council of the Medical and Chirurgical Faculty of the State of Maryland continues to dedicate itself to carrying out its responsibilities as defined by its charter by collecting and coordinating information on the activities of all Maryland organizations associated with physician discipline, by analyzing this information, and by reporting it in a comprehensive and understandable manner; be it further

Resolved, That the Council of the Faculty continues to dedicate itself to the special effort of improving communication and insuring the rapid due process of all actions within the peer review system with the ultimate goal of protecting the public and enhancing the profession of medicine.

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# RESOLUTION ON THE DELIVERY OF QUALITY HEALTH CARE FOR THE ELDERLY

Adopted by the House of Delegates of the
Medical and Chirurgical Faculty of Maryland,
September 26, 1987

Whereas, The United States Government promised to provide a broad range of health care services to all elderly Americans through the creation of the Medicare Program in 1966;

Whereas, The Federal Government is now reducing payments and curtailing benefits within the Medicare Program with plans to further reduce the 1966 Medicare Program;

Whereas, The need for expanded benefits in both catastrophic and long-term care in the Medicare Program is widely accepted;

Whereas, There exists an increasing need for additional funds to cover the health care requirements of new Medicare enrollees, currently estimated at a rate of 5,000 beneficiaries per day;

Whereas, Current and proposed financing of such expansion is both inadequate and ill-conceived;

Whereas, Like all Americans, the elderly population in this country have a compelling moral claim to dignified, high quality health care and were promised in 1945 that they had "the right to adequate medical care...the opportunity to achieve and enjoy good health...and the right to adequate protection from the economic fears of sickness"; and

Whereas, The financial burdens placed on the elderly due to unreimbursed medications and long-term care can be catastrophic; therefore, be it

Resolved, That all members of the Medical and Chirurgical Faculty of Maryland will demonstrate a continuing interest in providing quality care for the elderly by actively studying the issues, opposing policies detrimental to quality, accessibility and availability of appropriate care for all Americans and constantly evaluating the health care needs of the elderly citizens of Maryland;

Resolved, That the standards of treatment for elderly citizens as well as all Marylanders shall not be compromised due to political concerns not in the best interests of the individual patient's well-being or their continued high quality of life; and

Resolved, That all members of the Medical and Chirurgical Faculty will continue to exhibit sensitivity and responsiveness to the financial status of the elderly population and will consider the patient's financial situation when making a determination whether or not to accept Medicare assignment.

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- ☐ How should I allocate "fee dollars" for effective practice management?
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# Doctors Take Note

### Miscellaneous Meetings

**Feb 1–5 Fifth Annual Winter Symposium: Selected Topics in Internal Medicine**, Snowshoe, WV. Info: C. Easterling, Office of Continuing Medical Education, Box 3108 DUMC, Durham, NC 27710 (800-222-9984).

**Feb 26–28 Health Promotion, Disease Prevention—The Expanding Pediatric Role**, Omni Hotel, Richmond, VA. Virginia Chap., American Academy of Pediatrics and the Virginia Pediatric Society, 1001 E. Main St., Ste 301, Richmond, VA 23219 (804-643-8130).

**Mar 28–30 NIH Consensus Development Conference: Kidney Stones—Prevention and Treatment**, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a.m. and 5 p.m.).

**Apr 14–16 Common Hand Problems and Acute Injuries of the Hand and Upper Extremity-Chronic Wrist Pain**, Park Hyatt Hotel, Washington, DC, sponsored by the National Hand Research and Rehabilitation Fund, Inc. Fee: $300, 19 Cat I credits. Info: M. Sorenson, The Hand Surgery & Rehabilitation Center, 622 Massachusetts Ave. NE, Washington, DC 20002 (202-829-1000).

**Apr 20–24 Second Annual Review and Update in Critical Care Medicine**, cosponsored by the Center for Bio-Medical Communication and George Washington University School of Medicine, to take place in the Washington, DC area. Fee: $595 before Feb 1; $675 thereafter. Info: Svetlana Lisanti 201-385-1808.

**Apr 22–24. Twenty-third Annual Pediatric Springfest: Adolescent Medicine, Infectious Disease, and Office Pediatrics.** 11.5 AMA Cat I credits, 11.5 AAP PREP credits, and 1.2 CEU credits by Virginia Commonwealth University. Info: Ann Potter 804-786-0494.

**May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session**, Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

**Shady Grove Adventist Hospital**, 9901 Medical Center Drive, Rockville, MD 20850. Grand Rounds:

**Feb 4 Update: Inflammatory Bowel Disease**
**Feb 11 Legislative Update**
**Feb 18 The New GI Infections**
**Feb 25 Heart Transplantation**
**Mar 24 Clinical Approach in Evaluating Male Reproductive Disorders**

• • •

### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Edu-

cation, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Feb 19 Sex Offenders: Focus on Treatment.** Fee $100; groups of 5 or more may attend for $75/person. Info: P. Macedonia 301-955-6085.

**Mar 14–16 Spectrum of Developmental Disabilities X: Issues of Early Intervention.** Fee: $300; 20 AMA Cat I credits; 20 Cat A credits for psychologists; 2.0 CEUs from ASHA and for nurses. Info: C. Kearney 301-955-3168.

**Mar 17–18 Imaging Living Brain Chemistry: Principles and Practice.** Fee $290, residents and Fellows $145; 14 AMA Cat I credits. Info: P. Macedonia 301-955-6085.

**Apr 11–16 Pediatric Trends 1988.** Fee: $500, residents and fellows $350; 45 AMA Cat I credits, 45 PREP AAP credits. Info: P. Macedonia 301-955-6085.

**Diagnostic Cytopathology for Pathologists, 1988 Postgraduate Institute: February to May 1988**, subspecialty residency in Clinical Cytopathology, compressed into two courses, both of which must be taken:

**Feb–Apr Home Study Course A**—personal reading and microscopic study at own laboratory in preparation for Course B.

**April 25–May 6 In-residence Course B**—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA. Application and completed preregistration is advised ASAP: Preregistration must be completed **before March 25, 1988**, unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/11/88–12/5/88. Info: Celia Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer 5/9–13, 8/8–12, 11/14–18. Fee $460; 40 AMA Cat I credits.

**Advanced Obstetrics & Gynecology** 4/6–8. Fee: $325; 24 AMA Cat I credits.

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**Feb 25 Geriatric Care.** Fee: $25; 5.5 AMA credits. Cat I.

**Feb 27, 1988 Neurology and Music at Maryland.** Fee: $150: 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Green St., Baltimore, MD 21201 (301-328-6484).

**Mar 14–15 Second Annual Department of Family Medicine Weight Disorders Symposium**, International Hotel at BWI Airport. Fee: $135; 9+ AMA Cat I credits.

**Mar 24–25 Fourth National Traumatic Brain Injury Symposium "The Neglected Disease,"** sponsored by the Speech-Communication Disorders Program, MIEMSS, Shock Trauma Center, Baltimore. Info: R. Schwartz 301-328-6101.

**Mar 25–26 Symposium on Urologic Cancer**, Omni International Hotel, Baltimore. Fee: $175; 10+ AMA Cat I credits.

**Visiting Professor Program**—Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

**Visiting Practitioner Preceptorships**—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. AMA Cat I credits available.

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**Advanced Trauma Life Support Provider/Instructor Programs**, sponsored by University of Maryland/MIEMSS. Fee: $350–500; 16–22 CME Cat I credits. Info: Melody Nelson 301-328-2919.

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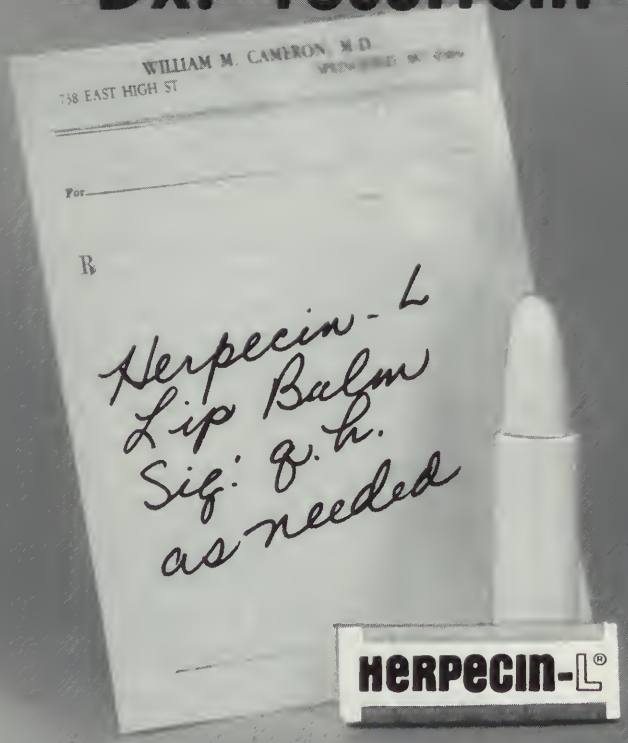
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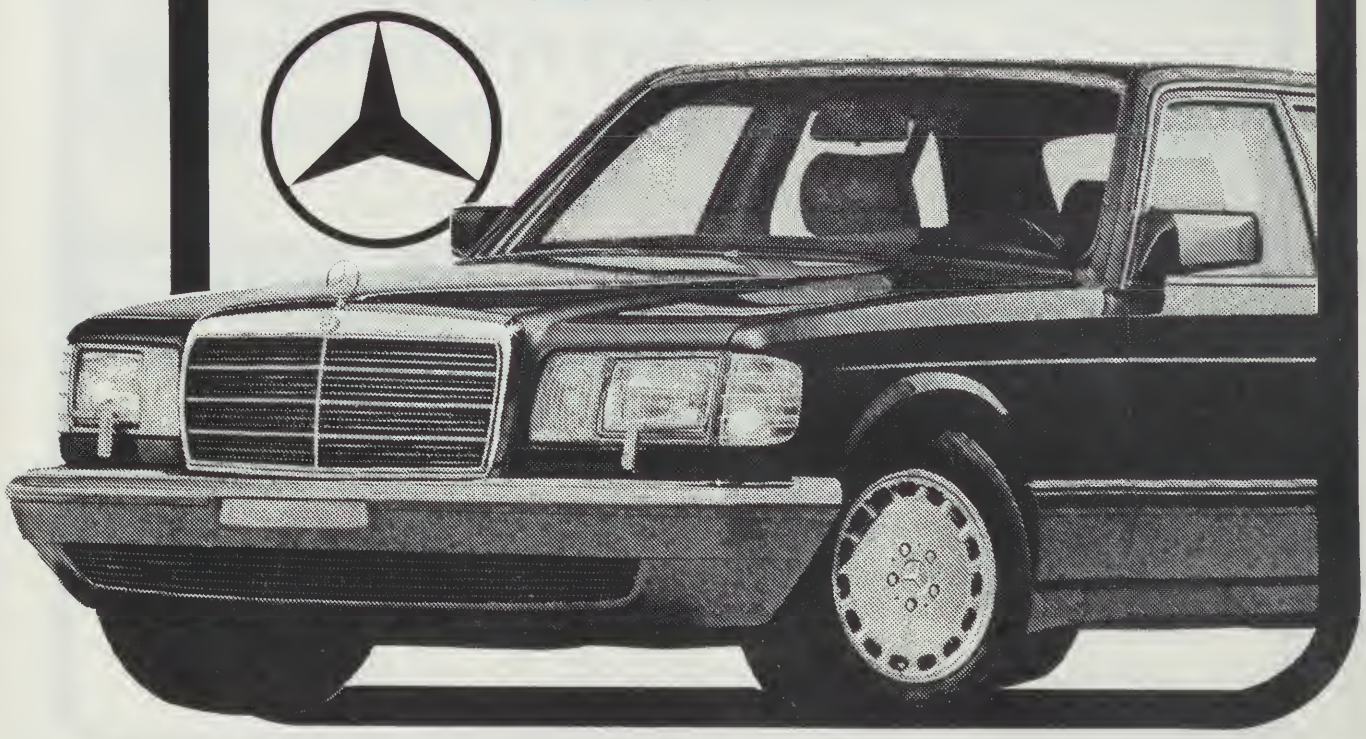
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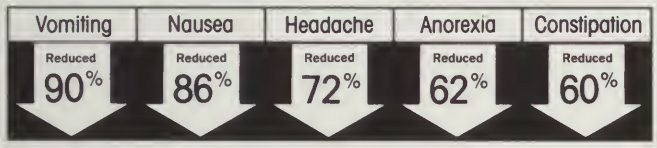
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**Warnings:** Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
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**Adverse Reactions:** Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
*Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
*Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
*Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
*Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
*Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
*Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
*Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
*Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
*Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
**Overdosage:** Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
**Dosage:** Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
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February 1988

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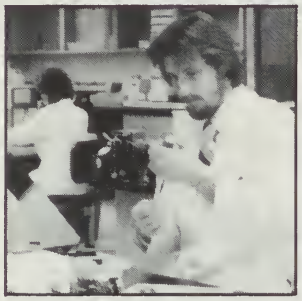
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*Cover:* A clipping from Marcia Noyes's scrapbook on the Med-Chi building. Cover story on page 119.

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# Members in the News

**Gregorio Koss** MD has been elected chairman of the department of medicine of Montgomery General Hospital. A member of the hospital's medical staff since 1973, Dr. Koss has been in private practice as a cardiologist for 19 years.

Dr. Koss graduated from the University of Buenos Aires; interned at Mt. Sinai Hospital in Miami Beach, FL; and completed a residency in internal medicine at St. Peter's Hospital in Albany, NY.

• • •

**Harold H. Kraft** MD has been elected chairman of the department of anesthesiology at Montgomery General Hospital. Dr. Kraft received a BS degree in Bioengineering from the University of Pennsylvania and graduated from Georgetown University School of Medicine. He completed an anesthesia residency at Georgetown University Hospital and is a Diplomate of the American Board of Anesthesiology.

• • •

**John G. Lavin** MD was honored as the Maryland Society of Internal Medicine Young Internist for 1987. Dr. Lavin graduated from the University of Maryland Medical School in 1976, trained at Mercy Hospital, and is board certified in internal medicine. He is on a number of area hospital staffs including Greater Baltimore Medical Center, St. Joseph and Mercy Hospitals.

• • •

**J. Leonard Lichtenfeld** MD has been named Maryland's first Distinguished Internist, an award made recently by the Maryland Society of Internal Medicine. Dr. Lichtenfeld, an attending physician at Sinai Hospital and Johns Hopkins Hospital, was honored for his activities on behalf of the Society and as chairman of its Legislative Committee. He also was cited for his ability to clearly communicate the concerns and needs of internists and their patients to state and federal legislators. Dr. Lichtenfeld is a member of the Health Advisory Committee to Congressman Benjamin Cardin.

Dr. Lichtenfeld, a 1971 graduate of the Hahnemann Medical College, trained at the Temple University Hospital, US Public Health Service Hospital, Baltimore Cancer Research Center, and the Johns Hopkins Hospital. Dr. Lichtenfeld is board certified in internal medicine and oncology.

• • •

**Frank J. Mayo** MD recently was elected to the board of directors of Montgomery General Hospital. A member of the hospital's medical staff since 1979, Dr. Mayo is director of the pulmonary function laboratory. He received a BA degree in chemistry from Denison University in Granville, OH, and his medical degree from Ohio State University.

• • •

**Michael D. Sulkin** MD has been elected chairman of the department of surgery of Montgomery General Hospital. An active member of the hospital's medical staff since 1976, Dr. Sulkin received his bachelor's degree from the University of Pennsylvania and medical degree from the Boston University School of Medicine. He served a surgical internship and residency at the Medical College of Virginia and was chief resident.

A diplomate of the American Board of Surgery and the National Board of Medical Examiners, Dr. Sulkin is an instructor in surgery at the George Washington University Medical School.

• • •

**Israel H. Weiner** MD was installed as President of the **Baltimore City Medical Society** at its annual meeting in December.

After receiving his MD degree from the University of Maryland in 1953, Dr. Weiner served an internship from 1953 to 1954 and a residency from 1954 to 1955 at the University of Maryland Hospital. Dr. Weiner was on active duty in the US Air Force from 1955 to 1957. From 1957 until 1960, he served as a resident in Neurosurgery and entered private practice in Neurosurgery in 1960.

Dr. Weiner is active in both state and city medical society affairs. He is Co-chairman of the Legislative Committee of Med-Chi and a BCMS representative to the Med-Chi Council.

Other officers elected by the BCMS in December were **Hiroshi Nakazawa** MD, President-elect; **Susan R. Guarnieri** MD, Vice-President; **Joseph H. Hooper** MD, Secretary; and **Albert Nahum** MD, Treasurer.

• • •

At the **Dorchester County Medical Society** Annual Meeting held in November, the following members were elected to serve starting January 1, 1988: **Morris Z. Effron** MD, President; **William L. Montague, Jr.,** MD, Vice-President; **Edmund J. MacLaughlin** MD, Secretary-Treasurer; and **Hubert L. Fiery** MD, Council Member.

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# Letter to the Editor

## Breast Cancer Booklet: A Backward Step in Therapy

The State of Maryland added "Part IV, Breast Cancer, Paragraph 20-113, Alternative Methods of Treatment" to its Health General Code on July 1, 1987. In essence, the surgeon is required by the obligation of this law to educate his or her patient about the several methods of treatment of breast cancer that may be medically practical. The instruction consists of providing the patient with a standardized written summary describing surgical, radiological, chemotherapeutic, and combinations of these forms of therapy. The patient signs a statement of receipt (provided by the Department of Mental Health and Hygiene) that is added to the medical record.

The booklet provides sound information, but the effort to educate will not be successful if the patient cannot comprehend, cannot read, cannot read because of poor eyesight, or if she signs the statement without reading the information. Transfer of this material cannot be legislated; it must be given directly to the patient by the surgeon, and this event must be documented in the Medical Record.

Most good surgeons have such a plan in operation. Giving the patient a booklet does not guarantee the desired end result. Only after a painstaking explanation will the patient be able to participate in "planning the most effective course." The booklet really will not save a life because many therapeutic failures will follow treatment by excellent surgeons and their colleagues in therapy.

A drop in the death rate from carcinoma of the stomach and uterus and to a lesser degree of the colon and rectum have been witnessed in the last three decades. Carcinoma of the breast, unfortunately, has had the same rate with a lowered rate only being seen in the early Stage I carcinomas.

The possible substitution of the booklet about cancer of the breast for the thoughtful explanation provided by the reputable surgeon would be a backward step in therapy. I am distressed that the Legislature of Maryland has seen fit to concern itself with strictly medical business. In the future, will the medical profession be given other manifestos in different areas of therapeutic endeavor?

***JOSEPH M. MILLER*** **MD**
**Interim Acting Chairman, Department of Surgery**
**Liberty Medical Center, Inc.**
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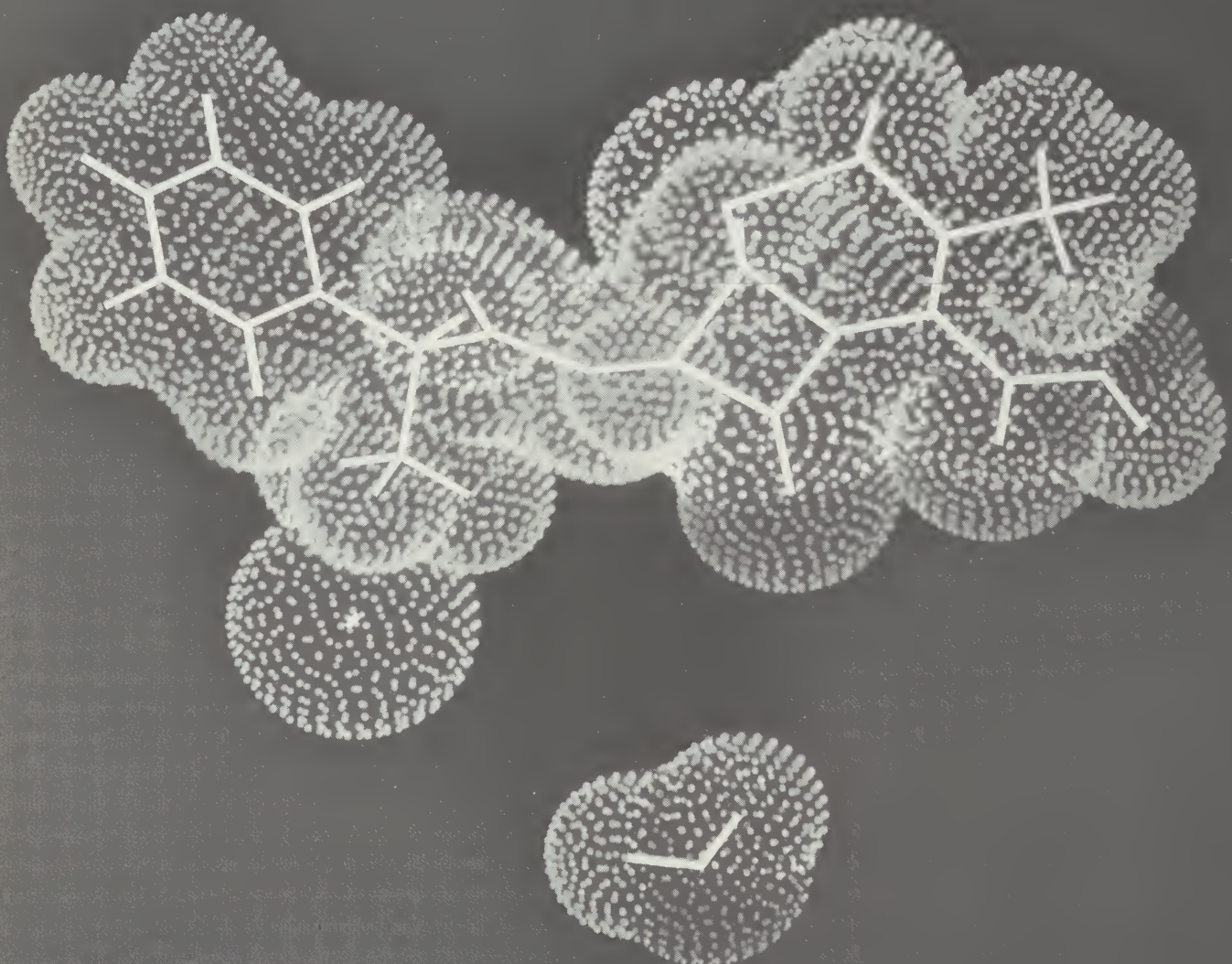
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Keftab is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Penicillin is the drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever.

*Due to susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.
† Due to susceptible strains of *Escherichia coli*, *Proteus mirabilis*, and *Klebsiella* sp.
‡ Due to susceptible strains of group A β-hemolytic streptococci.

**KEFTAB™**
**(cephalexin hydrochloride monohydrate)**

**Summary: Consult the package literature for prescribing information.**

**Indications and Usage:**

*Respiratory tract infections* caused by susceptible strains of *Streptococcus pneumoniae* and group A β-hemolytic streptococci.

*Skin and skin structure infections* caused by susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.

*Bone infections* caused by susceptible strains of *S aureus* and/or *Proteus mirabilis*.

*Genitourinary tract infections,* including acute prostatitis, caused by susceptible strains of *Escherichia coli, P mirabilis,* and *Klebsiella* sp.

**Contraindication:** Known allergy to cephalosporins.

**Warnings:** KEFTAB SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

**Precautions:**

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

**Adverse Reactions:**

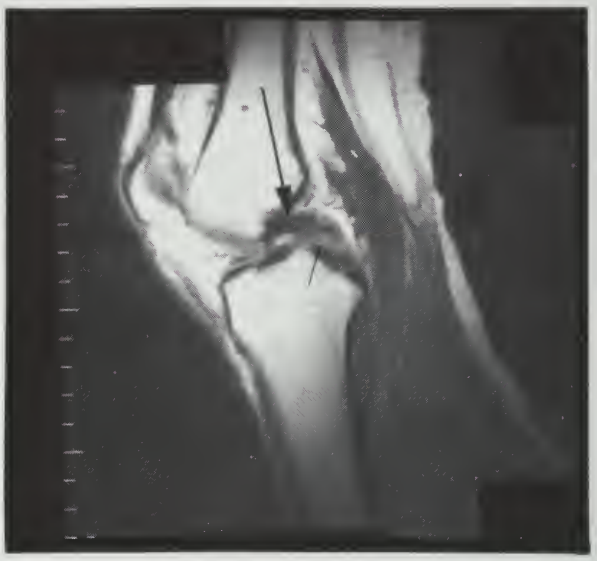
- *Gastrointestinal,* including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

PV 2060 DPP [091887] 849336

# MR UPDATE

## MRI Advances the Detection of Musculoskeletal Disease

### KNEE EXAMINATION



**HISTORY:** This 44-year old female recently sustained a knee injury and has clinical evidence of abnormal laxity of the posterior cruciate ligament.

**SCAN:** This parasagittal view near the midline clearly demonstrates avulsion of the posterior cruciate ligament (large arrow). The ligament is normally attached at its femoral origin. Total avulsion of the ligament has occured near its tibial insertion, the expected position of which is marked by the small arrow. The higher intensity (lighter) material at the tip of the small arrow represents hemarthrosis consequent to the recent injury.

**MRI HIGHLIGHTS:** The ligamentous structures of the knee are routinely well demonstrated by surface coil MRI. Surface coil imaging is essential for the special resolution needed in this area. Surface coil MRI is also useful for demonstrating meniscal injuries. Frank meniscal disruption may be seen and confirmed at arthroscopy. Since the articular surfaces, bone detail, and extra-articular structures are also shown by MRI, MRI is highly competitive with contrast arthrography. MR requires no painful injection and no ionizing radiation. MRI is also the procedure of choice for imaging aseptic necrosis of the hip and other musculoskeletal diseases.

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Epidemiology and Disease Control Program

**EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER**
COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

**FEBRUARY 1988**

## UPDATE: PREVENTION OF HAEMOPHILUS INFLUENZAE TYPE B DISEASE

Haemophilus b Conjugate Vaccine (Diphtheria Toxoid-Conjugate) has recently been licensed for use in children 18 months of age or older for the prevention of Haemophilus influenzae type b (Haemophilus b) disease. This vaccine consists of Haemophilus b capsular polysaccharide covalently linked to diphtheria toxoid (conjugate vaccine).

A previously developed vaccine consisting of the Haemophilus b capsular polysaccharide alone (polysaccharide vaccine) was shown to be effective in Finnish children over 24 months of age, the age group in which approximately 20% of all invasive Haemophilus b infections among U.S. children less than 5 years of age can be expected to occur. A similar, but not identical, polysaccharide vaccine was licensed for use in the United States in April 1985 on the basis of data demonstrating biochemical characteristics and immunogenicity comparable to the vaccine used in the original Finnish trial. In that Finnish trial, polysaccharide vaccine was not effective in children less than 18 months of age. Because of the small sample size, efficacy could not be demonstrated in children 18 to 23 months of age. Polysaccharide vaccine was immunogenic (as measured by antibody production) in children 18 to 23 months old, but less so than it was in older children.

Conjugate vaccine was developed with the ultimate goal of providing an effective vaccine for infants and younger children. Preliminary data from a new Finnish study suggest that conjugate vaccine was 87% effective in preventing Haemophilus b disease when administered in a three-dose regimen to infants 3 to 6 months of age. However, licensure of conjugate vaccine for use in infants in the United States cannot be considered until this and other efficacy trials are further evaluated. Since antibody production after vaccination with conjugate vaccine in children 18 months of age or older is substantially greater than that after vaccination with polysaccharide vaccine, conjugate vaccine has been licensed for use in these children.

### Safety

When conjugate vaccine alone was given to over 1,000 adults and children, no serious adverse reactions were observed. When conjugate vaccine was given with diphtheria and tetanus toxoid and pertussis vaccine (DTP) and inactivated polio vaccine (IPV) to 30,000 infants, the rate and

extent of serious adverse reactions did not differ from those seen when DTP was administered alone. In one study of over 500 children 15 to 24 months of age, no significant difference in local or systemic side effects occurred between groups of children vaccinated with either polysaccharide vaccine or conjugate vaccine. Local reactions were noted for 10.3% of children receiving polysaccharide vaccine and 12.5% of children receiving conjugate vaccine, while moderate fever (temperature >39.0°C [>102.2°F] occurred in 1.4% of children vaccinated with polysaccharide vaccine and 0.7% of children vaccinated with conjugate vaccine.

**Immunization Practices Advisory Committee (ACIP) Recommendations**

1. The ACIP recommends that all children receive conjugate vaccine at 18 months of age. The efficacy of conjugate vaccine in children 18 months of age or older has not been determined in field trials. However, studies comparing antibody production in children receiving conjugate vaccine with that in children receiving polysaccharide vaccine suggest that conjugate vaccine is likely to be more effective than polysaccharide vaccine. The ACIP therefore recommends use of conjugate vaccine in all children vaccinated against Haemophilus b disease.

2. While the duration of immunity after a single dose of conjugate vaccine is unknown at this time, it is expected to be at least 1.5 to 3 years. Until further information is available, revaccination is not recommended for children receiving conjugate vaccine at 18 months of age or older.

3. Vaccination of children more than 24 months of age who have not yet received Haemophilus b vaccine should be based on risk of disease. Children considered at high risk for Haemophilus b disease, including those attending day-care centers, those with anatomic or functional asplenia (i.e., sickle cell disease or splenectomy), and those with malignancies associated with immunosuppression, should receive the vaccine. Although risk of disease decreases with increasing age, physicians may wish to vaccinate previously healthy children between 2 and 5 years of age to prevent disease that can occur in this group.

4. Because many children who received polysaccharide vaccine between the ages of 18 and 23 months may have had a less than adequate response to the vaccine, they should be revaccinated with a single dose of conjugate vaccine. Revaccination should take place a minimum of 2 months after the initial dose of polysaccharide vaccine.

5. There is no need to routinely revaccinate children who received polysaccharide vaccine at 24 months of age or older.

6. Children who had invasive Haemophilus b disease when they were less than 24 months of age should still receive vaccine according to the above recommendations since most children less than 24 months of age fail to develop adequate immunity following natural infection.

7. Although increases in serum diphtheria anti-toxin levels can follow administration of conjugate vaccine, this vaccine should not be considered an immunizing agent against diphtheria. No changes in the schedule for administration of diphtheria toxoid, customarily given as DTP, should be made secondary to the use of conjugate vaccine.

8. Vaccination with either polysaccharide vaccine or conjugate vaccine probably does not inhibit asymptomatic carriage of Haemophilus b organisms. Although vaccinated children may be protected from invasive disease, they may pass the organism on to susceptible children. In addition, no vaccine is 100% effective. Therefore, chemoprophylaxis of household or day-care contacts of children with Haemophilus b disease should be directed at vaccinated as well as unvaccinated contacts. Because of the length of time necessary to generate an immunologic response to the vaccines, vaccination does not play a major role in the management of patients with Haemophilus b disease or their contacts. Vaccine may be given to previously unvaccinated children of appropriate age to provide protection against future exposure.

9. Conjugate vaccine and DTP may be given simultaneously at different sites. Data are lacking on concomitant administration of conjugate vaccine and measles-mumps-rubella (MMR) or oral polio (OPV) vaccines. However, if the recipient is unlikely to return for further vaccination, simultaneous administration of all vaccines appropriate to the recipient's age and previous status is recommended (including DTP, OPV, MMR, and conjugate vaccine).

Adapted from: CDC.MMWR,1987,37,2:13-16.

References available upon request.

## SEROLOGIC TESTS IN THE DIAGNOSIS OF ACUTE VIRAL HEPATITIS

The accuracy of diagnosing hepatitis B has greatly increased with the use of the hepatitis B core antibody IgM-specific test, which is 95% specific for recent hepatitis B virus (HBV) infection.

A positive hepatitis A IgM-specific antibody test confirms acute or recent hepatitis A infection.

The diagnosis of nonA/nonB hepatitis is made by excluding acute hepatitis A and hepatitis B, when both above-mentioned IgM-specific antibody test results are negative.

The relatively sensitive delta antibody test detects delta virus super- or co-infection with hepatitis B infection.

The table on the following page summarizes the interpretation of the three basic test results necessary for diagnosing the type of viral hepatitis.

Occasionally combined infections do occur, e.g., hepatitis A in a hepatitis B carrier, delta infection in a hepatitis B carrier, etc.

## INTERPRETATION OF SERODIAGNOSTIC TEST RESULTS FOR ACUTE SYMPTOMATIC HEPATITIS

| Tests | | | | |
|---|---|---|---|---|
| HBsAg | IgM Anti-HBc | IgM Anti-HAV | Anti-delta* | Most likely clinical diagnoses |
| - | - | + | | Hepatitis A (HA) |
| + | + | - | - | Hepatitis B (HB) |
| - | + | - | - | |
| - | - | - | | Non-A, Non-B hepatitis (NANB)** |
| + | + | + | | HA and HB |
| - | + | + | | |
| + | + | - | + | Acute HB/delta coinfection |
| - | + | - | + | |
| + | - | + | - | Acute HA in HB carrier |
| + | - | - | + | Acute delta infection in HB carrier |
| + | - | - | - | Acute NANB in HB carrier |

Note: HBsAg = hepatitis B surface antigen; Anti-HBc = antibody to hepatitis B core antigen; Anti-HAV = antibody to hepatitis A virus; anti-delta = antibody to delta virus.

*Testing should only be done in acute or chronic hepatitis B virus infection.

**Non-A, non-B (NANB) is a diagnosis of exclusion; it is not possible to diagnose coinfections of acute NANB with other acute viruses.

Adapted from: CDC.Hepatitis Surveillance. Report N.51,issued May 1987.

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# Executive Director's Newsletter

February 1988

**PHYSICIAN IDENTIFICATION NUMBERS**

Attention: Chiefs of Medicine at Maryland Hospitals
Chairs of Maryland Hospital Utilization Review Committees
Physicians and others serving on Maryland Hospital Utilization Review Committees

Maryland law (Health Occupations Article, Section 19-213) protects the confidentiality of the identities that go with physicians' unique identification numbers.

With the support of the Maryland Attorney General's Office and the Maryland Health Services Cost Review Commission, the Faculty has devised a program to better protect against potential abuse of these numbers.

The Chairs of Utilization Review Committees at Maryland hospitals may request and receive from the Faculty a physician's identity for use in the work of the Committee. However, any disclosure of the name that corresponds with a number outside the Utilization Review Committee by any individual is a violation of Maryland law.

Chairs of Utilization Review Committees and individuals serving on those committees must take every precaution to protect this confidentiality. The Faculty intends to report all instances of breaches of this confidentiality to the Maryland Attorney General's Office.

**PRO UPDATE**

The PRO Monitoring Committee continues to review the activities of the federally designated Professional Review Organization. Many physicians have expressed concerns regarding actions of the PRO, particularly with respect to denial of hospital stays and overall communication problems.

Faculty members are again encouraged to forward documentation to the PRO Monitoring Committee on specific cases where there may have been a compromise of quality care due to a PRO action.

The Faculty has no review power nor legal authority over the PRO but does maintain a working relationship with the Delmarva Foundation for Medical Care.

**IDENTIFICATION OF MEDICAL SPECIALTY**

The Maryland Board of Medical Examiners is processing applications for "Medical Specialty Identification." The letters of identification are being mailed daily, according to the date the application was received by the Board. Plans are to have this process completed by June 1988.

MEDICARE/ OBRA-87

Since the last publication of the Executive Director's Newsletter, there have been questions from physicians regarding the proper method for billing clinical laboratory services performed in the office setting.

Under present requirements, Medicare will not cover clinical laboratory tests unless billed on an assigned basis. This applies to both participating and nonparticipating physicians, and it is now prohibited to bill Medicare beneficiaries directly for laboratory services. Failure to comply with this requirement could result in sanctions including civil monetary penalties.

MAAC UPDATE

Congress has frozen physician reimbursement at 1987 levels for the first three months of 1988. Fee increases that were due on January 1, 1988 will not occur until April 1, 1988. Medicare Carriers will issue a letter to all physicians in February 1988 to advise that existing participation agreements are extended to April 1, 1988 and to provide the option for new or continued participation for the remainder of the 1988 calendar year.

RESOLUTIONS DEADLINE

The deadline for submission of resolutions for consideration at the 1988 Annual Meeting of the House of Delegates is FRIDAY, MARCH 4. Resolutions must be sponsored by a Med-Chi member, a component society of the Faculty, the Council, or committees of the Faculty. A resolution introduced by an individual member must have the endorsement of either one-third of the membership of his/her component society or 30 members of his/her component society, whichever is smaller.

1988 ANNUAL MEETING

The 1988 Annual Meeting will be held Wednesday-Friday, April 27-29 in Baltimore. The meetings and exhibits will be held at the Baltimore Convention Center, sleeping rooms will be at the Harbor Court Hotel, and the Presidential Banquet will be held on Thursday, April 28 at the Hyatt Regency Hotel.

Preliminary Programs were mailed to all members during the first week of February. If you have any questions about the meeting, contact Pat Munoz or Joann Cirillo at the Med-Chi offices.

MEMBERSHIP DEVELOPMENT

A review of the Faculty's current membership statistics reveal that overall, membership has remained static for the past several years. To increase membership, the Faculty's management structure is being reorganized to strengthen its marketing orientation and membership recruitment activity. Michael A. Murray, Director of Operations, is responsible for the development and implementation of this effort.

Angelo J. Troisi FACHE
Executive Director

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# QUALITY PRACTICE DIGEST

## Legal and Ethical Concerns of Medical Practice

### Physician Assistant

All physicians are reminded that a physician who employs a physician assistant may not delegate a medical duty to a physician assistant that is inconsistent with the job description filed with the Board of Medical Examiners as required under S14.5-302 of the Health Occupations Article. A physician who signs the job description may not delegate the supervision of the physician assistant to another physician, unless the job description has been amended to include the other physician as a supervisor and has been approved by and is on file with the Board of Medical Examiners.

Please note that a physician assistant may not prescribe drugs; this is not a medical duty that may be delegated to a physician assistant.

### Second Opinion

Ethical Opinion 108 of the Compendium discusses the issue of the consulting physician who treats a patient of another physician sent to the consulting physician for a second opinion.

Ethical Opinion 108 provides that:

.01 The patient has a right to choose his or her physician unless the patient agrees to limit the choice by contract.

.02 When a second opinion is required by an insurance or similar program, both the treating physician and the second physician should explain their respective roles to the patient. The second physician should not actively encourage or induce the patient to change physicians.

.03 Should the patient freely choose to transfer his or her medical care, the second physician may accept the patient if he or she so chooses. The treating physician should honor the patient's choice.

.04 Should the second physician disagree with the treating physician's opinion, a third opinion should be suggested. Whatever the outcome, the second physician should strive to communicate with the treating physician (Committee on Professional Ethics 6/27/85).

## Revision Of Amphetamine (Methamphetamine) Management Protocol

The Executive Committee acted to amend the following Amphetamine (Methamphetamine) Management Protocol:

1. Correspondence related to the prescribing, administering, and dispensing of amphetamine (methamphetamine) and received by the Maryland Division of Drug Control shall be referred to the Faculty for updating the computer tracking system and further referral to the Medical Consultant of that Division who is also Chairman of the Faculty's Drug Committee.

2. The Medical Consultant so designated by the Maryland Department of Health and Mental Hygiene will evaluate and review all pertinent medical documentation and either approve or disapprove amphetamine (methamphetamine) use in accordance with article 27, 285 (a-2) and (b-1) of the Annotated Code of Maryland.

3. The Medical Consultant's decision will be reported to the Faculty for data base update, to the Division of Drug Control for information, and to the physician concerned.

4. In accordance with this law, if there is any doubt as to the validity of the diagnosis for which the amphetamines (methamphetamine) are prescribed, the documentation shall be submitted to the Faculty's Committee on Drugs for its review and advice.

5. Correspondence related to the investigation of prescribing, administering and/or dispensing any other drugs or substances are not included in this protocol. These complaints must be forwarded to the Commission on Medical Discipline for investigation and recommendation.

## New Ethical Opinions

The following Ethical Opinions were adopted by the Council at its January 23, 1988 meeting:

Second Surgical Opinion A physician who renders a second surgical opinion may be asked to assist in the surgery. While not in and of itself unethical, the situation presents great opportunity for abuse. Accordingly, a physician rendering a second surgical opinion should only assist in that surgery if no other qualified physician is available.

Medical Record Requests Involving Alternative Delivery Systems
When dealing with medical record requests from alternative delivery systems, the physician's primary concern must be the continuity of patient care. In every instance, the physician must supply enough information to the alternative delivery system to allow the uninterrupted care of the patient.

Likewise, requests from physicians to alternative delivery systems for patient records must be honored and handled in a similar timely manner. The treating physician or the medical director within the system has the ultimate responsibility for providing these records.

Physicians may charge alternative delivery systems for the transfer of medical records.

Physician Dispensing Physician dispensing of drugs and other medical devices can be in the patient's best interest. Physicians dispense only to their patients and should make the following disclosures:

1. That the item is dispensed as a convenience for the patient and that the patient is not obligated to purchase the item;

2. That the item may be purchased from a pharmacy or medical supply store of the patient's choosing; and

3. The physician's charge for the item.

Physicians should include the following information on the label of each medication (excluding samples and starter doses) dispensed from their offices:

* Name and address of the physician;
* Date the medication was dispensed;
* Month and year when the medication expires, if known;
* Special handling instructions for proper storage;
* Name and strength of the medication; and,
* Instructions for proper administration of the medication and significant interactions with other drugs or substances relevant to that patient.

The physician should keep the manufacturer's lot number on record.

# VOICE YOUR OPINION

The Faculty's Public Relations Committee is considering whether a logo and standardized title are needed for The Medical and Chirurgical Faculty of Maryland, and we would like your opinion. By answering the questions below, every member of Med-Chi can participate in the decision-making process.

Please complete and detach the following questionnaire and mail it to: Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201 no later than March 21, 1988. The results will be published in a forthcoming issue of the Maryland Medical Journal.

We appreciate your help.

1. Choose one of the following as a standard title for the organization:

___ A. Current title: The Medical and Chirurgical Faculty of Maryland

___ B. The Maryland Medical Association

___ C. Other:

2. If you agree that Med-Chi needs a logo, please answer the following:

A. What color combination would you suggest?

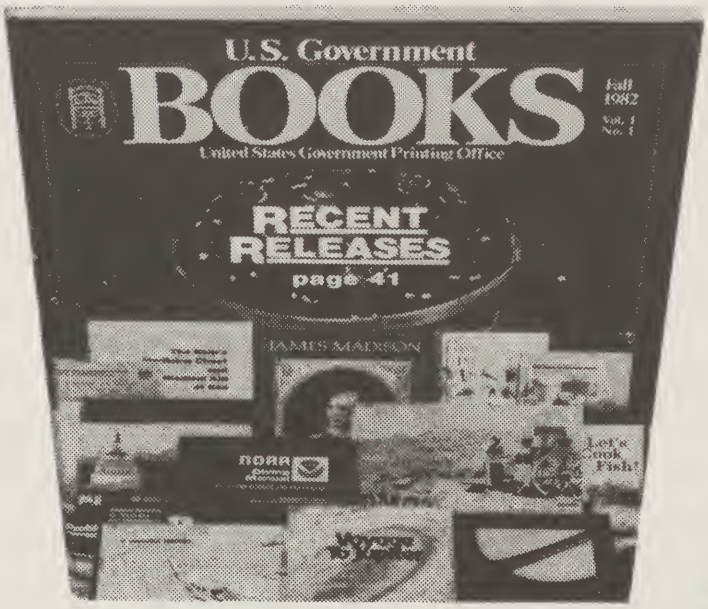
B. What shape should our logo be?

C. What symbol, if any, should be incorporated in our logo design (for example, caduceus or stethoscope)?

3. Additional comments:

* If you have a logo design idea, please send a sketch along with your questionnaire.

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## Hypnosis and Reincarnation Experiences

*JACOB CONN MD*

There are hypnotists who believe that the retrieval of reincarnation experiences is possible for almost everyone. The technique they use is relatively simple. The hypnotist begins by confiding that he can recall many of his past lives while under or out of hypnosis and by assuring his prospective subjects they also are capable of such experiences. The hypnotist tells the subject to concentrate on a flickering light or listen to a monotonous sound track while he drones "Deeper and deeper, deeper asleep, down, very relaxed, deeper, deeper. . . ." The subject is instructed to imagine that he or she is traveling through time and moving toward a faint light at the end of a long tunnel. The hypnotist informs the subject that he or she will begin to relive an incarnation experience when he or she reaches the light or suggests that the pages of a calendar are slowly turning backward to a time before the subject was born.

Hypnosis has also been used to "progress" the hypnotic subject into the future where he or she can experience episodes of what will happen. Hypnosis essentially is a method of creating a wish-fulfilling fantasy that is accepted as a reality by a susceptible subject.

The concept of age progression is scientifically impossible because it implies that events that never transpired actually can be envisioned. A more apt explanation is that the process is role playing by a suggestible subject. All hypnosis is self-hynosis. The essential factor is not the power of the hypnotist but the willingness of the subject to be hypnotized.

Spontaneous hypnotic reincarnation experiences are rare and usually do not occur without the direct suggestions and the continuous guidance of a biased hypnotist. In my series of 4,000 hypnotic subjects, there were no examples of spontaneous reincarnations. No such clinical reports have been published in the *International Journal of Clinical and Experimental Hypnosis* during the past 30 years. Nevertheless, hypnotists have reported subjects who vividly remember events from past lives. The much publicized case of Bridey Murphy has been explained as being a form of cryptomnesia: the retrieval of forgotton tales heard in childhood that are recalled as if they actually happened.

Psychologists long have been aware of the spurious nature of self-reported reincarnation experiences. At the fourth International Congress of Psychology in 1900, Theodore Flournoy, Professor of Psychology at the University of Geneva, stated that Catherine Muller, a medium who worked as a saleswoman, claimed to be the reincarnation of a fifteenth century queen of ancient India, Queen Dimandine, and also of Marie Antoinette. Mrs. Muller reported she had lived on Mars and could speak the Martian language. However, when these language patterns (glossolalia) were analyzed, they were found to be a variant of Hungarian, her father's native language. Professor Flournoy published these studies in his book, *From India to the Planet Mars*, and explained Mrs. Muller's reincarnation experiences in terms of wish-fulfilling dreams and the acting out of childhood fantasies.

Freud, who had practiced hypnosis, was a skeptic. He said, "All that we can expect after death is to go on living in the recollection of our children." Adler believed that "When we imaging ourselves coming to earth again through many incarnations, it is based upon a desire to be like God." Jung, who also practiced hypnosis, said "A belief in reincarnation proves to me only the phenomena of belief, not the content of belief. Whether what continues to exist is conscious of itself, we do not know either. The conception that most people form of the hereafter is largely made of wishful thinking and prejudices." Jung also asked "Have I lived before in the past as a specific personality? I don't know."

Hypnosis makes it possible to believe in wish-fulfilling fantasies. There is no scientific proof that hypnotic subjects can retrieve actual reincarnations. It is a folie à deux to believe that a hypnotic subject can relive or recreate such reincarnation experiences.

*Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.*

**Doctor, Planning to Relocate?**

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# One Minute with Diabetes

## The Diabetic School Child

*Problem: The six-year-old daughter of our neighbor was found to have diabetes about two months ago. Since then, the whole neighborhood (and especially the school the child attends) is in chaos. Some parents want the child withdrawn from regular classes because the children get frightened when she has hypoglycemic reactions. The little girl is losing weight and is very tearful. The child's mother often asks me for advice because my husband is a physician. What can I do to help this family and the neighborhood?*

**The first priority for everyone is education.**

• The school physician or the school nurse should advise teachers and parents that there is no chance for other children to develop diabetes from contact with this diabetic girl. Instructions should be given for her to be treated normally at all times except for between meal snacks if they are requested by her physician. However, these should be given during class breaks so as to be least conspicuous and disconcerting to classmates; perhaps the whole class could have a snack at the same time. Teachers should receive information about the symptoms of hypoglycemic reactions and be prepared to cope with them should they occur. (Hypoglycemic reactions should not occur with an adequate diabetic program.)

• The parents of the child need intensive "diabetes education" without the presence of the child, who should remain in school. (In the past, this was done through hospital admission of the child, and the family was educated a little at a time during brief hospital visits. Such a system is both expensive and inadequate.) Diabetes education is so important that it should take priority over employment and other personal plans until it is completed.

If these steps are taken, the child and the community will resolve their problems in less than a week in 95 percent of the cases. Unfortunately, in this instance these things should have been done two months ago. The emotional trauma caused by the delay will take a little longer to overcome. If the parents are not compassionate and emotionally mature, they may require family counseling.

• When the opportunity presents itself, this little girl should attend one of the camps for diabetic children. Camp Glyndon,* operated by the Maryland Affiliate of the American Diabetes Association, is an excellent facility in our area. Camp attendance teaches self-reliance in management of diabetes and allows the diabetic child to recognize that many other children have the same problem. Patients learn to participate in a full camp life under excellent supervision.

When the child is allowed to go to camp, parents learn to reduce some of the "overprotectiveness" that is natural for all parents having children with health problems.

• Urge the family to work with their physician, the school nurse, and the teachers. When another diabetic child comes along, the path will be much easier because everyone will have gained knowledge from this experience.

The local diabetes affiliate will provide many teaching aids and is an excellent source for continuing education.

***DeWITT E. DeLAWTER* MD**
**Editor**

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* Information concerning Camp Glyndon may be obtained by contacting the American Diabetes Assoc.; Maryland Affiliate, Inc.; 3701 Old Court Rd. Ste #19; Baltimore, MD 21208 (301-486-5516).




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# *Heart RX:* A New Tool for Physicians

*FRANK R. CLAUDY MD*

**New educational materials will help the physician to maximize the "teachable moment" in the patient-physician encounter.**

Dr. Claudy, a Fellow of the American Academy of Family Practice, is Assistant Professor of Family Medicine at the University of Maryland School of Medicine; co-chairman of the Healthsite Subcommittee of the American Heart Association, Maryland Affiliate; and the Affiliate member of this Commission.

At some point in every patient encounter, physicians are presented with a window of opportunity to communicate health information effectively. This window may open to us just after a diagnosis is made, at the hospital bedside, or during the illness of a patient's family member. It is the "teachable moment," a time when our words have special importance and a maximal chance to effect healthy change.

These teachable moments are frustratingly brief, however, due to circumstances involving both to our patients and the demands of practice. It is critical that we marshal our educational talents to make the most of the times we have. Good educational materials continually are made available by different sources, although critical review often is required to assure scientific validity and bias-free presentation.

The physician's office (or healthsite) is a largely untapped resource. Patients are then a captive audience and are likely to associate health messages with the illness that brought them in for their appointments. Many studies have shown that physicians can invest educational materials with considerable importance by personally reviewing them with patients[1,2] rather than just placing brochures in the waiting area.

The American Heart Association (AHA) has recently developed *Heart Rx*, a tool for physicians to expediently convey to patients information on diet modification and nutrition, high blood pressure control, smoking cessation, and the early warning signs of heart attack and stroke. The AHA's mission is to reduce the morbidity and mortality due to cardiovascular disease (CVD). The fruits of a national effort, in which many organizations have participated, include a 33 percent decrease in deaths due to CVD over the last 15 years. While this is encouraging, more must be done: CVD remains the primary cause of death in this country, annually costing us approximately one million citizens.[3]

Unhealthy life-styles superimposed over pathogenetic factors account for a large share of CVD-related disability and death. It is estimated that blood pressures remain uncontrolled in almost two thirds of our 25 million identified hypertensives. A third of our population continues to smoke cigarettes, and obesity continues to be a prevalent condition. Today, the **average** adult serum cholesterol level, which has been declining, is about 210 milligrams percent.[4] If the populace could achieve a new average less than 200 mg percent, we might see as much as 20 percent decrease in CVD-related deaths. Evidence suggests that people *are* making healthier choices, but slowly. The AHA recently directed an intensive education campaign in schools, work environments, and the mass media, to promote "well behaviors."

*Heart Rx* has been extensively field-tested by family physicians, internists, and cardiologists in their offices, and found to be a valuable addition to their practices. Pre- and post-use patient surveys demonstrated that patients were becoming more informed about modifiable risk factors for heart disease and stroke; they also indicated more motivation to make healthy changes in their lives.[5]

*Heart Rx* is a compact desktop box containing collated materials that can be implemented at three levels. Level I provides heightened health awareness in the office environment with posters and display brochures. (Most doctors currently deploy educational materials this way.) At level II, materials are provided for use by physicians as a part of the patient visit, which can be a strong intervention.

As an example, let us say that you have a patient returning to discuss routine screening labs, and the total cholesterol is moderately elevated. During your explanation of the risks of unchecked hypercholesterolemia, you detect in your patient heightened attention to your every word (fueled, perhaps, by an understandable anxiety). This is the teachable moment. Reaching into the *Heart Rx* nutrition folder you produce the American Heart Association Diet. A glimmer of recognition passes over the patient's countenance. After all, AHA developed this diet nearly twenty years ago, and most people have seen something of it. It is also the same as the Phase I diet for hypercholesterolemia. Now is the best chance for the patient to read, understand, and make a commitment to implement the material in this time-tested pamphlet.

Three properties of a personal commitment that maximize the probability of long-term adherence to a treatment plan are that the commitment should be active, public, and uncoerced.[6] *Heart Rx* contains materials to establish **active** commitment to change, including "agreeing to quit" forms for smokers, and self-report diet charts. **"Public"** indicates that the individual making a committment will inform important oth-

*HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.*

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ers about his or her proposed change in habit or lifestyle. This kind of information sharing is facilitated by good educational materials. Finally, the education strategy espoused by *Heart Rx* is based upon a model of patients as **partners in health.** By its flexibility, the module offers patients a feeling of control over their lives. There is no coercion involved. (By contrast, many of us, frustrated by recalcitrant individuals, occasionally may have tried punitive or threatening approaches to mandate adherence. Intimidation rarely works, and it is coercive).

Level III of *Heart Rx* offers an additional tier of sophistication by providing patient reminder materials, follow-up handouts and even congratulatory diplomas for patients who successfully quit cigarettes. Included are instructions for training office staff in the use of "tickler systems," so that your energy remains focused where it should be—on direct patient contact.

AHA's imprimatur on every document in *Heart Rx* guarantees that all the information is backed by the research community and medical consensus. Included are well-referenced scientific statements covering the rationale behind all the patient education materials, which are helpful in answering patients' questions and may be prompted by brochures or posters on the office wall. Components of the module will be updated as new information becomes accepted medical practice. (For instance, the scientific statement on nutrition is being revised to reflect the new standards for blood cholesterol.)

*Heart Rx* is inexpensive. To order *Heart Rx*, write: American Heart Association, MD Affiliate; 415 N. Charles St.; Baltimore, MD 21202. Or call 685-7074.

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# Highlights: Executive Committee and Council Actions

*Executive Committee - October 15, 1987*

• **Minutes** The Executive Committee minutes of September 17, 1987 were approved as distributed.

• **Introduction** J. David Nagel MD, Vice-Chairman, introduced Jean Bienemann, Esquire, who will be working with Gerard Evans in the Government Relations Department of Med-Chi.

• **Accident Awareness Program** Correspondence from John L. Morgan MD of Kent and Queen Anne's Hospital in which he expressed his concern over the high mortality rate in Kent County as a result of automobile accidents was discussed. Dr. Morgan has proposed that the local medical society form a committee to enlist the support of educators, public officials, emergency physicians, and service organizations to determine a means of educating the public in taking precautions to prevent automobile deaths. Executive Director Angelo Troisi suggested that Med-Chi become involved in this proposal of Dr. Morgan's; the committee concurred.

• **Med-Mutual Proxies** Discussion of the implementation of the House of Delegates' motion concerning the collection of proxies for the election of Med-Mutual's Board Members was discussed at length. Gerard Evans advised the committee that legislative proposals were being considered that could preempt the necessity for gathering the proxies; however, it was noted the action called for in the House motion must be carried out.

Dr. Yosuico moved that the proxies should be collected through the component societies, each society designating its own representative on the proxies. The motion was adopted, and Med-Chi staff will coordinate the implementation of this procedure with the components.

Mr. Troisi reported that one of the specialty societies had inquired whether Med-Chi had established a procedure for gathering proxies and wished to be advised as to how to proceed. It was agreed that Med-Chi should respond that we will work through the component and specialty societies to accomplish this.

• **Legislative Update—Peer Review System** Gerard Evans met with Delegate John G. Gary and discussed Delegate Gary's letter indicating his desire to create a Malpractice Board that would delicensure physicians who have had more than two successful tort actions against them. The peer review system was explained to Delegate Gary, and he has withdrawn the legislation; however he indicated he expects a great deal from Med-Chi and looks to us for leadership and commitment when dealing with errant physicians.

• **Senior Outreach Program** Mr. Evans reported the Senior Outreach Program is continuing and, as of this date, six meetings have been held with representative senior groups. Although most seniors remain unconvinced and therefore supportive of Mandated Medicare Assignment, the program has received acclaim from members of the General Assembly.

• **AIDS Education** Med-Chi's letter to Maryland legislators supporting AIDS education in the schools and an article in the *Washington Post* reporting an emergency regulation had been approved by the Maryland legislature requiring AIDS education in Maryland schools were distributed to the Committee for information.

• **Medical Mutual** Leon E. Kassel MD informed the Committee that Raymond Yow MD, Acting CEO of Med-Mutual, asked to meet with him and Mr. Troisi to discuss the future relationship of Med-Mutual and Med-Chi and indicated a very positive attitude toward improving relations between the two organizations.

• **Maryland Foundation for Health Care** As a matter of information, Mr. Troisi reported that Judith Redding, Executive Director of the Foundation, will be on leave for the next three weeks and that Michael Murray, Director of Med-Chi's Operations, will oversee the activities of the Foundation in the interim.

• **Maryland Medical Laboratory, Inc.** Jose M. Yosuico MD briefed the Committee on a recent meeting with Selvin Passen MD of the Maryland Medical Laboratory, and Bernard Kleiman MD, President of the Baltimore County Medical Association, at which they discussed legislation being considered by the Baltimore County Council concerning construction of incinerators in the county. The Baltimore City Medical Society has expressed its opposition to this legislation, taking the position that decisions affecting the health and well-being of the community would be placed with county agencies that have no expertise in the health field, and has requested Med-Chi support of their position.

Following discussion, the Committee took no position on this issue, indicating it was not within Med-Chi's jurisdiction to do so in that it was not a statewide matter but an issue to be decided by the county. However, the Committee had no objection to the request of Dr. Yosuico that a member of the Committee attend a meeting of the Baltimore County Council on October 28.

• **Nurse Shortage** Addressing the present shortage of nurses in Maryland, Mr. Troisi advised the Committee that there is a Governor's Commission studying the issue and that the Center for Nursing is spearheading a drive to attract nurses into the state. To lend assistance, Med-Chi will send a communication to all component and specialty societies requesting their opinions on how this problem can be resolved.

• **Blue Cross/Blue Shield** Dr. Kassel gave a brief report on a meeting he and Donald T. Lewers MD had attended at the personal request of Blue Cross/Blue Shield for discussions regarding malpractice insurance premiums.

• **Building Acquisition** Joseph Harrison reported that Med-Chi had been approached regarding possible interest in the acquisition of the building located at 1202 Maryland Avenue, adjacent to the Med-Chi Coggins Building. The owner, Mr. Croker of Albert Gunther

Hardware, Inc., purchased the building in 1984, has partially renovated it, and has quoted a selling price of $250,000, which is negotiable. The building would provide Med-Chi with much-needed office space and storage space, as well as a garage that would provide four parking spaces.

After discussion, the Committee adopted a motion to encourage staff to keep negotiations ongoing with the seller until the next Council meeting, November 21, and referred the matter to the Building Committee for a recommendation to the Council at that meeting.

### *Executive Committee—November 12, 1987*

• **Committee on Hospital Medical Staffs** The Executive Committee accepted the following recommendations of the Committee on Hospital Medical Staffs for referral to Council:

The distribution of AMA model hospital staff bylaws to the 52 hospital medical staffs in Maryland with the recommendation that individual hospital bylaws be reviewed and updated if necessary so as to comply with AMA recommendations;

That all active members of medical staffs, geographic and nongeographic, be treated equally in terms of qualifications for positions on hospital staff committees, staff governance bodies (i.e., officers of the medical staff), and representation on hospital governing bodies elected by the general medical staff; and

That the Faculty develop a centralized legal service to advise subscribing medical staffs on legal matters of concern.

• **Public Relations Committee** The Executive Committee reviewed and approved criteria submitted by the Public Relations Committee for a Citizenship Award for nonhealth professionals. The nominee selected as the most outstanding will receive a plaque at Med-Chi's Semiannual Meeting. The Executive Committee approved the expenditure of $75 for the plaque.

• **Legislative Update** Gerard Evans, Director of Government Relations, stated that the malpractice problem is going to be a major issue during the 1988 legislative session and all our activity in Annapolis will have bearing on the peer review issue.

Mr. Evans pointed out that from the legislators' point of view, there is no difference between the Commission on Medical Discipline, the Board of Medical Examiners, and Med-Chi and from this perspective, Med-Chi is seen as responsible. He reported that there appears to be a move to institute the Florida system of peer review, which has lay people and lawyers who judge the physicians much like a malpractice trial.

The Committee was informed that the Secretary of Health has spoken of creating an organization consisting of the deans of the two medical schools, the Board of Medical Examiners, the Commission on Medical Discipline, the President of Med-Chi, and the physician Deputy Secretary of Health. This group might set policy for discipline, licensing, deal with all regulations, set standards of care, and so forth.

• **Alliance for Responsible Health Policy** The Committee reviewed the synopsis on the Alliance as presented and agreed that any prefiled legislation concerning the activities of the coalition needs to be followed. It is understood that this information has been provided to the chairman of the Legislative Committee and that committee will continue to follow-up the future activities of the Alliance.

• **HCAO/Board of Medical Examiners** Mr. Troisi updated the Executive Committee regarding an issue between the Health Claims Arbitration Office and the Board of Medical Examiners that revolved around the Board rejecting the request of the HCAO to send a copy of its panel data form with the renewal application for licensure. The Board's Secretary, Dr. Arthur Keefe, forwarded an Attorney-General's opinion that stated it was not the responsibility of the Board to become involved in HCAO mailout. Med-Chi received a call from the Governor's office requesting Med-Chi's assistance in resolving the problem; Med-Chi complied, and the task was accomplished.

• **Historical Exhibit** Joseph Jensen announced that the Faculty's Auxiliary had won the grand prize for a History of Medicine exhibit at the annual meeting of the Southern Medical Association Auxiliary. The exhibit featured items loaned to the Med-Chi Auxiliary from the Faculty's collection of historical articles of Dr. John Archer, founder of the Medical and Chirurgical Faculty. The Executive Committee suggested that a letter be sent to the Auxiliary congratulating them for winning the grand prize for the display.

• **Physicians Reliance Association** Mr. Troisi updated the Committee on the status of the Physicians Reliance Association (PRA). The Insurance Commissioner's office had issued an announcement that the PRA group had withdrawn from the State of Maryland as of November 5. That matter left some problems pending, such as the status of those physicians who purchased coverage and what period of time would their policies be effective, if at all. Mr. Troisi further stated that Dr. Kassel and Dr. Fred Miltenberger met on November 8 in Cumberland and that Dr. Miltenberger indicated his willingness to do whatever could be done from the standpoint of Med-Mutual to be prepared to assist these physicians, if possible. Further identification of the impact of this matter will be forthcoming.

• **Resolution on Health Care for the Elderly** A letter to Governor Schaefer enclosing the Faculty's resolution on the delivery of quality health care to the elderly together with a resolution adopted by the Massachusetts Medical Society describing the negative effects the present environment in Massachusetts is having on the practice of medicine in that state were distributed to the Committee for information. The letter conveys to the Governor the continued support of Maryland physicians in the delivery of quality health care to all citizens of Maryland. Individual copies were also sent to each legislator.

### *Council—November 21, 1987*

• **Minutes** The minutes of the Council and Executive Committee were acted upon as follows:

| | |
|---|---|
| Minutes approved: | Council, Saturday, Septèmber 26, 1987 |
| Minutes accepted: | Executive Committee, September 17, 1987 |
| | Executive Committee, October 15, 1987 |

• **Emeritus Membership** Council approved Emeritus Membership for the following physicians (all retired):

| | |
|---|---|
| Allegany County | Ralph Reiter MD<br>Cumberland |
| Baltimore City | Elihu Allinson MD<br>Stevenson |
| | Theodore Kardash MD<br>Baltimore |
| Garrett County | James H. Feaster, Jr., MD<br>Oakland |
| Affiliate Members | Albert B. Esquenazi MD<br>Miami, FL |
| | Walter D. Carver MD<br>South Hadley, MA |

These names will be submitted to the House of Delegates for consideration at the 1988 Annual Meeting.

• **Dues Waiver** The following physician was granted a Dues Waiver for 1988 as requested by the component society indicated:

| | |
|---|---|
| Charles County | Vernon B. Dettor MD,<br>La Plata (physical disability) |

• **Meeting Date Approved** The Council meeting date of Saturday, January 23, 1988 was approved.

• **Presentation to Auxiliary** Dr. Jose Yosuico, on behalf of the Building Committee, presented Mrs. Ching Barretta, Auxiliary President, and Mrs. Mildred Taylor, Chairman of the Auxiliary's Building Committee, with a framed drawing of the Faculty building in appreciation of the Auxiliary's contribution to the Med-Chi Building Fund.

• **Building Update** Dr. Yosuico, on behalf of the Building Committee, reported that the renovations under contract with the architect and general contractor have been completed, except for some necessary corrections for which we are withholding payment pending final completion. He stated that additional work in progress on the upper floors of the old building should be entirely completed by June 1988.

*Building Fund Assessment*—Dr. Yosuico informed the Council that most of the building fund assessments have been paid with the exception of 67 delinquents, which the component societies have been asked to assist in collecting.

*Proposal to Acquisition Property*—The Council was presented with a proposal of the Building Committee to purchase property located at 1202 Maryland Avenue, adjacent to the Coggins Building. The building has been inspected by staff and Dr. George S. Malouf, Chairman of the Building Committee and has been found to be in sound condition. If purchased, the building could serve as an opportunity to increase the Faculty's assets through rental or other profit-making operations. Council discussions of the asking price of $250,000 resulted in a motion, which after amendment was adopted, authorizing staff to conduct negotiations to purchase the building for the lowest price possible, up to $225,000.

• **Peer Review Resolution** A resolution on peer review was presented to the Council on behalf of president Leon E. Kassel MD. Following discussion in which three minor changes were made by amendment, the resolution was passed unanimously for distribution as appropriate. The resolving clauses read as follows:

> *Resolved*, That the Council of the Medical and Chirurgical Faculty of the State of Maryland continues to dedicate itself to carrying out its responsibilities as defined by its charter by collecting and coordinating information on the activities of all Maryland organizations associated with physician discipline, by analyzing this information, and by reporting it in a comprehensive and understandable manner; be it further
> *Resolved*, That the Council of the Faculty continues to dedicate itself to the special effort of improving communication and insuring the rapid due process of all actions within the peer review system with the ultimate goal of protecting the public and enhancing the profession of medicine.

• **Hospital Medical Staffs Committee** Upon recommendation of the Committee on Hospital Medical Staffs, the Council adopted the following recommendations:

> That the Executive Committee approve distribution of AMA model hospital staff bylaws to the 52 hospital medical staffs in Maryland with the recommendation that individual hospital bylaws be reviewed and updated if necessary so as to comply with AMA recommendations;
> That all active members of medical staffs, geographic and nongeographic, be treated equally in terms of qualifications for positions on hospital staff committees, staff governance bodies (i.e., officers of the medical staff), and representation on hospital governing bodies elected by the general medical staff; and
> That the Faculty develop a centralized legal service to advise subscribing medical staffs on legal matters of concern.

• **Maryland Foundation for Health Care Update** Dr. Raymond M. Atkins, Secretary, presented a report on current activities of the Maryland Foundation for Health Care. It was reported that the financial situation of the Foundation is improving and that a schedule for repayment of funds owed to the Faculty is planned. The efforts of the Faculty in maintaining the viability of the Foundation were reaffirmed.

• **Personnel Policies** The Council considered the updated personnel policies as presented by Dr. Nagel. Following a lengthy discussion, a motion as passed endorsing the fact that the Executive Director has the authority to set personnel policies within the constraints of the Faculty budget.

• **Physicians Reliance** Mr. Troisi updated the Council relative to the withdrawal from the Maryland market of the Physicians Reliance Association (PRA).


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Member, Prescription Footwear Association.


He stated that 40 physicians had purchased coverage for medical liability insurance through PRA. He also stated that at least two hospitals had notified some of their physicians that the hospital insurer had questioned the appropriateness of physicians retaining staff privileges if they were insured by PRA. This matter requires further review; however, it has been the position of PRA that those policies issued in good faith in the State of Maryland prior to the withdrawal of PRA are in force and will remain in force through the full recovery period, which is a minimum of 12 months. This length of time is important because it had been reported previously that some policies were for a 6-month period, which would have caused a crisis within the medical community in December of 1987. This update will be included in the next issue of the *President's Letter* to the membership.

• **Legislative Update** Mr. Evans briefed the Council on the gravity of the anticipated *Washington Post* newspaper article due to be released sometime in late December. He assured the Council that every single piece of legislation of medical significance will be colored by the scathing report expected from not only the *Post* article but also the comcomitant media fallout. Mr. Evans noted that Tort Reform and other proactive, aggressive legislative measures will be difficult, if not impossible to pursue given the crisis in confidence many members of the legislature feel toward physicians peer review. He has received reliable reports that legislation has been drafted that will remove some or all of the peer review decision-making process from physicians' management and control.

• **Peer Review Update** Mr. Troisi informed the Council that a Task Force on Peer Review had been appointed by Dr. Kassel to implement the tasks as outlined in the peer review resolution. He further stated that in light of recent negative reviews by the press concerning the peer review system in Maryland, staff was in the process of developing a position paper on peer review for presentation to the press during a news conference to be held at Med-Chi in December. This information will be distributed to every newspaper in Maryland and to the legislators.

Dr. Hilary O'Herlihy, Chairman of the Commission on Medical Discipline, reported on the activities of the Commission, the processing of cases, and recent bad reviews by the press criticizing the decisions made by the Commission in the disciplining of physicians. Dr. O'Herlihy defended the actions of the Commission, stating that each case is judged on its own merit.

Area meetings and course announcements are listed each month under *Doctors Take Note*

# The More Things Change . . . ,

Eighty years ago this month, G. Milton Linthicum MD, Chairman of Med-Chi's legislative committee, was in Annapolis testifying before the 1908 legislature on behalf of a Public Health Building to house Maryland's health related agencies. The State Board of Medical Examiners, established fifteen years earlier in 1892 at the Faculty's encouragement, was still without state funding and without an office. The same was true of other state health agencies, the Maryland Board of Health, the Tuberculosis Commission, and the Maryland Lunacy Board.

With the names changed to J. Leonard Lichtenfeld MD, and Israel H. Weiner MD, the current Co-Chairmen of Med-Chi's legislative committee, and the subjects changed to issues like funding for the Maryland Commission on Medical Discipline, the scene reoccurs daily in Annapolis during this legislative session.

Med-Chi differs from most other state medical societies in that it was established by a charter from the legislature with a charge to protect the health of Maryland's citizens and to promote the spread of medical knowledge. For 189 years, Med-Chi has been the voice speaking on behalf of patients and physicians during the annual legislative sessions in Annapolis.

The following article, from the February 23, 1908 issue of *The News*, preserved in the Faculty's Archives, shows your medical society at work eighty years ago.

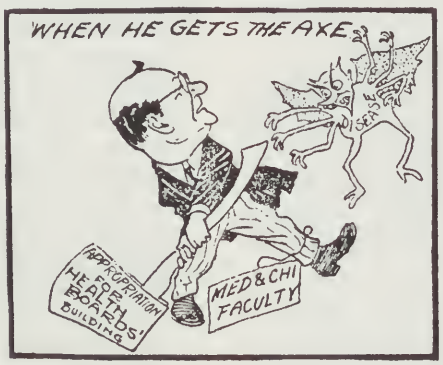
***Joseph E. Jensen,* Director**
**Department of Health Policy Research and Information Systems**

## PUBLIC HEALTH INSTITUTION

**Splendid Opportunity for State to Aid Worthy Cause.**

A delegation of physicians from Baltimore and from the counties of Maryland will visit Annapolis this morning to appear before the legislature in the interests of the bill appropriating $100,000 for a public health institution and library building for the Medical and Chirurgical Faculty of Maryland.

The new building, as the name indicates, will not only be the home of the library of the faculty, which is composed of thousands of rare and costly publications, invaluable to the medical profession for consultation in treating diseases, but in the new structure will also be located all of those activities of the state which work toward the dissemination of knowledge regarding public health, and which are actively engaged in combating disease. Among these activities may be mentioned the State Board of Health, the Tuberculosis Commission, which will of necessity require permanent headquarters in this city; the State Lunacy Board, which has the supervision of all the insane in the state; the State Board of Medical Examiners, which has for 15 years been forced to shift about the city to find suitable quarters in which to hold the examinations and to transact its business, and the city offices of the state hospitals of the insane. Then, also, a profession, the work of which is closely allied with that of the medical profession, that is, the Pharmaceutical Association, which will have a hall in the new building, and toward which the pharmacists have raised $5,000.




A pressing public necessity is a suitable hall in which to hold public meetings for lectures dealing with matters of public health. These lectures are, so to speak, "the ounces of prevention," which go directly to the public and which will eventually prevent a vast amount of disease and suffering.

The profession of Maryland is now in a position where they feel it absolutely necessary to bring the results of their labors before every member of the profession. In other words, they need a medical clearing-house, where all new ideas may be at once imparted by word of mouth or by ready distribution of medical books to their colleagues, who are from lack of opportunity prevented from learning and utilizing all the improved methods in the treatment of their patients.

Looking at the question in a cold-blooded, calculating way, it has been found that the life of each working man is worth on an average $1,000 to the community in which he lives. If he dies of typhoid fever, for instance, the state loses not only the thousand dollars, but frequently his children become a charge on the county in which he lived.

The physicians of the city and state have contributed thousands of dollars toward the new building, their total contributions being nearly $50,000. They now ask that the legislature, representing the people, should do its part, by giving financial assistance to this work which will directly benefit every citizen of the state.

As one example of the fact that money would be saved to the state by centralizing the state medical and other health activities, is the fact that the State Board of Health is paying a yearly rental of $1,200 for quarters that are inadequate to the demands made upon them, and the board has been forced to combine with the City Health Department for a laboratory.

The chairman of the legislative committee of the faculty is Dr. G. Milton Linthicum. The chairman of the soliciting committee, which has raised $48,000, is Dr. A. P. Herring, and Dr. E. N. Brush, chairman of the building committee, which has selected a site.

The State of Maryland now has an opportunity to become the pioneer in states having a public health institution.

**In the Matter of**
**Ali A. Azima MD**
**Before the**
**Commission on Medical Discipline**

**Findings of Fact,**
**Conclusions of Law and Order**

Based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission determined to charge Ali A. Azima MD (the "Respondent") with violation of Section 14-504(26) of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, in that he was subject to investigation or disciplinary action by a licensing or disciplinary authority of another state for an act that would be grounds for discipline under the Medical Practice Act, to wit: professional incompetence.

Appropriate notice of the charges and grounds from which they arose, was given to Respondent by letter dated June 30, 1987.

**Findings of Fact**

Based on evidence produced at the hearing, the Commission finds that:

1. At all times relevant to this case, Respondent was a physician licensed to practice medicine in the State of Maryland;

2. On January 15, 1985 the Florida Board of Medical Examiners issued an order suspending Respondent's license to practice medicine in Florida and providing for a stay of the suspension and imposing conditions of probation.

3. This action of the Florida Board was based on a finding of fact that Respondent has violated Section 458.331(1)(t), Florida Statutes that states as a ground for discipline, "Gross or repeated malpractice or the failure to practice medicine with that level of care, skill and treatment which is recognized by a reasonably prudent similar physician as being acceptable under similar conditions and circumstances."

4. The violation of the Florida Statute was based on findings that he failed to send tissue specimens to a pathologist for examination after performing termination of pregnancy procedures on two patients; failed to determine the Rh factor of a patient; and inserted an IUD into a patient without taking adequate precautions to ensure that the patient was not pregnant at the time of insertion.

5. The acts that gave rise to the order of the Florida Board of Medical Examiners would be grounds for discipline under the Medical Practical Act, to wit section 14-504(4), professional incompetence.

**Conclusions of Law**

Based on the foregoing Findings of Fact, the Commission finds that the Respondent violated Section 14-504(26) of the Medical Practice Act in that he was disciplined by the licensing and disciplinary authority of another state for an act that would be grounds for discipline under the Maryland Medical Practice Act.

**Order**

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 3rd day of November 1987 by a majority vote of those members of the Commission hearing this case, hereby

ORDERED that the license of the Respondent, Ali A. Azima MD, to practice medicine be SUSPENDED, and it is further

ORDERED that the Suspension be STAYED, upon the performance of the following conditions:

1. That the Respondent fully comply with the requirements of the Order of the Florida Board of Medical Examiners dated January 9, 1985, which are:
   a. That the Respondent make semiannual appearances before the Florida Board of Medical Examiners for a period of three years from January 15, 1985;
   b. That the Respondent shall earn 50 hours of Category I continuing medical education annually from January 15, 1985 and continuing through the probationary period.
2. That the Respondent file with the Commission a certificate of the Florida Board of Medical Examiners that the Respondent has fully complied with its order of January 9, 1987.
3. That on filing of the aforesaid certification, Respondent may petition the Commission for termination of this Suspension.

ORDERED that in the event that the Commission determines, after notice to the Respondent and an opportunity to be heard, that the Respondent has not complied with the conditions set forth herein, the Commission shall impose the Suspension and may proceed with such additional charges as the Commission deems appropriate.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

• • •

**In the Matter of**
**Yin Chuan Hung MD**
**Before the**
**Commission on Medical Discipline**

**Order for Summary Suspension**
**of Medical License**

Based on its review of information received from the Medical and Chirurgical Faculty ("Med-Chi") Peer Review Committee and Med-Chi's Committee on Drugs regarding the medical practice of Yin Chuan Hung MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Find-

ings of Fact, Conclusion of Law, and Order.

### Findings of Fact

Based on all the information known and available to it the Commission has reason to believe that:

1. Respondent is a solo practitioner in family practice medicine in Maryland;

2. Respondent's medical knowledge is deficient insofar as:

a. Respondent cannot diagnose significant pathology as is demonstrated by his treatment of Patients A and B.

Patient A presented at Eugene Leland Memorial Hospital ("Leland Hospital") with malaise, weight loss and fever for two weeks, increasing neck discomfort, and dizziness. When Respondent saw Patient A at Leland Hospital, he failed to properly evaluate and diagnose the condition of Patient A, and did not request appropriate testing and consultation. An infectious disease consult was recommended. Respondent refused to permit an infectious disease consult. Although there had been a negative x-ray for pneumonia three (3) days prior to discharge, on discharge Respondent diagnosed pneumonia without obtaining confirming x-rays to verify the location and extent of the pneumonia. Respondent discharged Patient A prior to adequate resolution of Patient A's disease leading to further complications. Patient A was admitted to Prince George's Hospital Center with a cerebrovascular accident ("CVA") due to bacterial emboli, endocarditis, aortic regurgitation, and pulmonary edema 48 hours after discharge from Leland Hospital.

Patient B was admitted to the Leland Hospital Intensive Care Unit with pulmonary edema, accelerated hypertension, heart failure, and severe anemia. Further work-up was planned by another physician. When it was discovered that Respondent was Patient B's physician, Respondent was contacted by the Leland Hospital staff. Respondent failed to recognize the need for further testing and consultation for Patient B. Respondent had Patient B sign himself out of Leland Hospital contrary to prior medical advice.

As a result of Respondent's treatment of Patients A and B, Respondent was summarily suspended from Leland Hospital.

b. Respondent lacks a working knowledge of pharmacology:
   1) The medications prescribed by Respondent often do not correlate with Respondent's diagnosis;
   2) Respondent often overprescribes certain controlled dangerous substances or often incorrectly prescribes;
   3) Respondent does not know the interactions of different medications;
   4) Respondent does not know which dosages of controlled dangerous substances are proper; and
   5) At times Respondent has prescribed on demand and has prescribed to drug abusers.

c. Respondent cannot distinguish between a patient who is a drug abuser and one who has a medical problem which requires treatment using controlled dangerous substances.

d. Respondent can not correctly distinguish depressive illnesses.

3. Respondent's practice of medicine is deficient insofar as Respondent fails to:

a. Obtain historical, physical, and laboratory data insofar as Respondent often fails to:
   1. Obtain a complete patient history
   2. Make physical findings
   3. Order appropriate laboratory tests
   4. Perform adequate medical work-ups
   5. Analyze laboratory results
   6. Make a differential diagnosis

b. Seek consultation when appropriate;

c. Know how to give or properly read an EKG. Respondent administers EKGs in his office and does not ask for consultations to assist him in interpreting the EKGs;

d. To make a comprehensive correlation between the physical examination, the diagnosis and the treatment;

e. Respondent's medical treatment is not justified by the diagnosis made.

4. Respondent's medical record keeping is deficient insofar as

a. There is an absence or incomplete development of the history of the patient, physical examinations, differential diagnosis, progress notes, and scheduling of future patient assessments;

b. There is a lack of interrelation between the various components of SOAP (Subjective, Objective, Assessment, Plan) format;

c. Respondent often fails to record the patient's history, physical findings, laboratory tests ordered and the results of those tests, progress notes, a differential diagnosis; Respondent often fails to record the reasons for prescribing controlled dangerous substances;

d. There is often a lack of documentation as to why certain laboratory tests are ordered and a lack of documentation as to what, if any, action was taken as a result of the laboratory tests.*

5. A family practitioner is a primary care physician and is expected to handle the vast majority of patient

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* The patients' records reviewed that support these findings are attached to this document as Exhibit A but will not be made public to protect patients' confidentiality.

problems and complaints. To practice competently a family practitioner must be able to obtain historical, physical, and laboratory data; to adequately diagnose a medical condition; have an adequate knowledge of pharmacology; have adequate medical knowledge; and be able to recognize significant pathological conditions.

6. The failure of a family practitioner to obtain historical, physical, and laboratory data; the failure to adequately diagnose a medical condition; the failure to have an adequate knowledge of pharmacology; the failure to have adequate medical knowledge; and the failure to recognize significant pathological conditions places patients in imminent danger and demonstrates an inability to competently practice medicine, particularly as a family practitioner.

7. A family practitioner is a primary care physician and is expected to handle the vast majority of patient problems and complaints. To fulfill this role the physician must be able to develop a reasonable differential diagnosis based on historical, physical, and laboratory data. This information must be adequately documented in order to assure the health, safety, and welfare of her/his patients. Data must be collated and assembled in such a fashion that another health professional can assume responsibility for the care of the patient and in such a way that unnecessary testing and retesting is prevented.

8. To practice competently a family practitioner must be able to keep adequate records.

9. The failure of a family practitioner to keep adequate records and the failure to collect the data robs the patient of the protection expected from a licensed physician and can expose the patient to risk during subsequent treatment.

10. A physician who has deficiencies in her/his medical knowledge and deficiencies in his/her medical practice poses to an imminent risk to the health, safety, and welfare of her/his present patients and future patients.

11. A physician who has deficiencies in her/his record keeping may pose a risk to the health, safety, and welfare of her/his present patients and future patients.

12. Based on the above findings of fact, the Commission has reason to believe that Respondent is professionally incompetent and thus under the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, Section 14-504(4), could (after notice and an opportunity for a hearing) be reprimanded, placed on probation, or have his medical license suspended or revoked, as more fully set forth in the Commission's charge letter, attached hereto.

13. Respondent's medical knowledge is deficient, Respondent's medical practice is deficient, and Respondent's record keeping is deficient. Respondent poses a grave risk and imminent danger to the health, safety and welfare of the citizens of Maryland.

### Conclusion of Law

Based upon the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b), Annotated Code of Maryland.

### Order

It is this 26th day of October 1987 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver (1) his diploma-sized Certificate of the licensure from the Commission; (2) his current Department of Health and Mental Hygiene License Renewal Certificate, and (3) any and all documents reflecting any prescribing privileges; and be it further

ORDERED that a hearing to consider this summary suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the Respondent.

***HILARY T. O'HERLIHY*** **Chairman**
**Commission on Medical Discipline**

• • •

## In the Matter of Walfrido Tanyag MD Before the Commission on Medical Discipline

### Order Vacating the Order for Emergency Suspension

On June 30, 1987 the Commission on Medical Discipline (the "Commission") entered an Emergency Order summarily suspending the license of Walfrido Tanyag MD (the "Respondent") to practice medicine in Maryland.

### Findings of Fact

The Commission makes the following findings of fact:

1. At all times relevant hereto, Respondent was a physician licensed to practice medicine in Maryland.

2. Since the issuance of the Emergency Order suspending the license of Respondent, Respondent has retired from the practice of medicine due to reasons of health and has surrendered his license, which the Commission accepted October 6, 1987.

3. Since August 19, 1987, Respondent has not been licensed to practice medicine in Maryland, and Respondent has not practiced medicine in Maryland since June 30, 1987.

### Conclusion of Law

Based on the above findings of fact, the Commission by a majority vote of its members considering this case makes the following conclusions of law:

1. The Commission has no jurisdiction to act on Respondent's license since Respondent has surrendered his license to practice medicine in Maryland.

### Order

Based on the above findings of fact, conclusions of law, the Commission by a majority vote of its members considering this case hereby

ORDERS on this 6th day of November 1987 that the Emergency Order issued on June 30, 1987 is hereby vacated.

***HILARY T. O'HERLIHY,*** **Chairman**
**Commission on Medical Discipline**

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*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*


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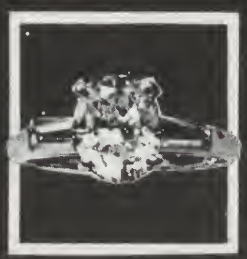
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**Contraindications:** There are no known contraindications to the use of 'Tagamet'.

**Precautions:** While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

**Adverse Reactions:** Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

**How Supplied: Tablets:** 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

**Liquid:** 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

**Injection:**

**Vials:** 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

**Prefilled Syringes:** 300 mg./2 ml. in single-dose prefilled disposable syringes.

**Plastic Containers:** 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

**ADD-Vantage®* Vials:** 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG:L73B Date of Issuance Apr. 1987

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J-6138 January 1986

# Will Your Prescribing Habits Cost Your License?

*DON M. LONG MD*

**Misuse and abuse of prescribed narcotics is a common problem in medical practice. Flagrant misuse of the license to prescribe narcotics can result in disciplinary action and even loss of the privilege of practicing medicine. Since narcotics remain an invaluable part of the physician's repertory against pain, it is important to understand their appropriate use.**

Dr. Long is Chairman, Department of Neurological Surgery, The Johns Hopkins Hospital, Baltimore.

The surveillance mechanisms now operative make it inevitable that anyone who regularly prescribes narcotics for large numbers of patients or who knowlingly maintains an addict with prescription narcotics outside a comprehensive program for substance abuse will be reported to the Med-Chi Committee on Drugs. This means at least an embarrassing series of questions and could culminate in an even more embarrassing visit to the Committee.

The treatment of pain differs according to the origin and can best be discussed in terms of etiology. It is traditional to discuss the management of acute pain, of cancer pain, and of chronic pain separately. When treating acute pain and cancer pain, the principal concern is the most efficacious use of the chosen drug. When treating chronic pain, the situation is much different, and it is with these patients that most abuses occur.

## General Principles of Narcotic Use

Narcotics are the most effective of all pain-relieving medications and in many situations are the only effective method of pain control.[1] Nevertheless, the first rule of use is that if a nonnarcotic analgesic will suffice, it should be used. Narcotics have their effect in the central nervous system, unlike the antiflammatory analgesics that are active peripherally.

No one narcotic works better than another provided the doses are equal. Patients do respond quite differently in terms of side effects. Many patients unable to tolerate one drug will respond quite well without side effects to another. Narcotics also vary greatly in their euphoric affects. Codeine and oxycodone (Tylox/Percodan) are generally the least euphoria producing; for most patients merperidine (Demerol) and morphine provide the greatest euphoric effect. Heroin has no greater analgesic potential than any other narcotic in comparable dosage. All patients who take narcotics will develop physiological dependence and tolerance to the drugs. Only a small number will exhibit true psychological dependence.[2]

## Appropriate Use of Narcotics for Chronic Pain

It is useful and practical to think of patients with chronic pain problems in three general groups. There are a significant number of patients with complaints of chronic pain without physical findings or imaging abnormalities suggestive of an organic cause of the pain. Some of these have overt psychiatric disease, but most have a personality dysfunction and psychosocial abnormalities. Scheduled drugs or other narcotics for pain control are never indicated in these patients in the absence of clear physical indications.

There is another group of patients with an organic cause for pain who have not been fully evaluated or treated. The appropriate course is not maintenance of narcotics but a definitive diagnosis and appropriate treatment.

A third group of sufferers have an organic pain problem for which no specific therapy is available. In a small number of such patients maintenance with narcotics may be the only relief possible. However, this course is feasible only after an attempt at multidisciplinary management of the pain. After thorough evaluation in a facility expert in pain therapy, it may be decided that narcotic maintenance is a valid course of therapy. This is a decision and therapy tool for experts, never for primary care physicians.

The chronic pain syndrome is characterized by a complaint of incapacitating pain, anxiety, and depression and by misuse of drugs, particularly tranquilizers and analgesics. Two-thirds of these patients suffer from back problems, and the majority of the remainder have headache, peripheral neuropathy, and spinal cord or brain injury. A small number of patients suffer from chronic pain syndromes of visceral origin.

The average patient has undergone several operations, usually on the spine, is seriously depressed, and is using more than commonly prescribed doses of narcotic and other scheduled drugs. The patients obtain these drugs from more than one physician or by badgering a personal physician for more medication than should be prescribed. It is never acceptable therapy to allow such patients to set their own doses or to insist on choosing the medications. It is never acceptable to knowingly maintain these patients on excessive doses of drugs; true addicts should be referred to programs for substance dependence rather than be maintained on a narcotic analgesic on the pretext of pain relief. Patient insistence on any of these courses of prescribing is never an excuse for inappropriate use of medications.[3]

**Table 1. Do's and Don'ts of Chronic Pain**

**Do**
- Insist upon a reasonable diagnosis.
- Treat that diagnosis appropriately.
- Refer patients you can't diagnose to a specialized pain unit.
- Watch for the medical addict or seller.

**Don't**
- Treat "PAIN" without a diagnosis.
- Use long-term narcotics without concurrence from an expert.
- Let the patient do the prescribing (choose the drug or the dose).
- Use injectable drugs.
- Use *any* scheduled drugs for a long time without a review.
- Maintain a known addict on the pretext of pain.
- Leave the depressed, addicted chronic pain sufferer without appropriate referral for treatment.

**Table 2. Signs of the Medical Addict**

- Chronic pain complaints without findings of disease
- Increasing demand for narcotics or other scheduled drugs
- Using other drugs as analgesics
- Obtaining drugs from multiple sources
- "Lose" drugs regularly
- Their own doctor is "out of town" and can't prescribe
- Often need drugs on a weekend
- Often call at night or holidays
- Want undated prescriptions
- Want prescriptions without amount
- ***The major sign is the constant use of more drugs than you prescribe***

### Patient Evaluation

The evaluation of a patient with chronic pain begins with a thorough physical examination, laboratory and x-ray studies as indicated, and a definitive diagnosis (Table 1). When no diagnosis can be made substantiating the cause of pain or when no definitive therapy is available to treat the cause, referral to a comprehensive pain program should be considered. These programs also emphasize diagnosis, usually through a multidisciplinary approach, utilizing whatever specialists are necessary. They also emphasize treatment of anxiety and depression, and virtually all make withdrawal from narcotics and inappropriate tranquilizers a condition of treatment. Withdrawal from these drugs must be individualized, but a good rule to follow is reduction of drugs by 10 percent per day. Psychiatric assessment is mandatory.

It is not the purpose of this article to discuss the multimodal management of chronic pain, but it is important to stress that withdrawal from all narcotics forms the foundation of almost every pain treatment program in the United States. A small number of patients with well-defined, truly untreatable organic pain-producing problems are considered candidates for long-term maintenance of narcotics. In these patients, the amount of drugs is carefully controlled, escalation is never allowed, and substance abuse is never tolerated by the therapist. These few patients are the only ones with benign pain syndromes where long-term narcotic use is employed. In most pain programs, they represent a small fraction of the total number of patients seen. In all other benign pain states, narcotic or scheduled drug administration is not used as a part of pain therapy.

### Psychologic Narcotic Dependence

These patients, who used to be called addicts, demonstrate a constant pattern of drug-seeking behavior and overuse (Table 2). They are the patients who threaten the doctor's reputation and license. The patterns of drug use are very similar, and the excuses used for acquisition of drugs are monotonous. These patients commonly complain bitterly of intractable pain without any physical evidence for a cause. They escalate the dose of drugs, steadily demanding more and more. They often obtain drugs from multiple sources.

They call at night and on the weekends at the most inopportune times, for more drugs. They frequent emergency rooms indicating that their own physicians are unavailable and ask for small amounts of drugs to tide them over a weekend or vacation. Visits to the physician's home are common. Drugs are purported to be lost frequently. The excuses are virtually always the

same, the most common being "I dropped them in the toilet" or "They were stolen from my car." Such patients report that family members are using the patients' drugs inappropriately, and patients often seek drugs to help them over a period of stress or to cover a projected period of absence. They frequently ask for undated prescriptions or prescriptions without amount. Any of these signs should alert the physician to psychologic substance dependence, and such patients should be referred to a substance-abuse program. Most will refuse to go, but this is no excuse for maintaining their drug use inappropriately.

Another group of patients present with the same behavior, but they sell the drugs rather than use them. Many controlled substances have a significant value for illicit sale. This is a much more common problem than most physicians believe, but one that can be eliminated by judicious use of all controlled drugs.

### Prescribing Scheduled Drugs

Many states have monitoring programs that constantly evaluate the prescribing habits of physicians with regard to controlled substances. Patients who are heavy users of these drugs are identified, and physicians who prescribe consistently for individual patients or who prescribe unusual amounts of controlled drugs are brought under scrutiny. At the very least, injudicious prescribing can bring an embarrassing letter from the Med-Chi Committee on Drugs. A pattern of inappropriate use of narcotics may necessitate a practice review that could culminate in revocation of license if the abuses have been flagrant.

Furthermore, the very patients who are so insistent on narcotic administration and so resistant to any attempt to control their medications now are successfully suing physicians who have allowed this misuse to continue. There are no benefits for the physician in improper prescribing of narcotics, and the risks are many and serious.

The two major pain problems in the general population are headache and back pain. Scheduled drugs are virtually never indicated for either. Most headaches are caused by tension and respond to simple measures aided by stress management. The headache of spinal osteoarthritis should be treated with simple physical measures (heat, exercise, TENS, collar, home traction). The most serious problems such as migraine and cluster headaches are best left to the expert. Narcotics may be used but only with patients well known to the physician and in the context of a defined treatment plan controlled by a specialist in headache therapy. Narcotics and scheduled drugs should never be given to an unknown patient, used at patient insistence in large quantities, or prescribed for long periods. Any patient requiring controlled substances for headache control should be referred to experts for management.

In most patients, back pain has no definable cause. Scheduled drugs are almost never indicated for long-term use. During acute episodes of severe muscle spasm or sciatica, narcotics are useful. Most such patients should be hospitalized. Narcotics given for a few days usually suffice to control the pain. Any patient still complaining after two weeks needs reevaluation, not more scheduled drugs. Treatment of most patients' low back pain includes weight control, exercise, avoidance or modification of pain-producing activities; TENS, heat or cold, massage, and other active therapies may be needed in severe situations. Muscle relaxants are not very effective; nonsteroidal antiinflammatory drugs are the best medication. Only those patients with nerve root compression or severe mechanical syndromes with muscle spasm need restriction of activity or narcotics.

Scheduled drugs play no role in the management of most pain complaints. When they are necessary, begin with codeine. It has the least abuse potential. Oxycodone (Tylox or Percodan) is much more likely to be misused. There is little excuse for Dilaudid or Demerol in any but truly severe pain states. Short-term use is the key.[3] A few days is nearly always enough. Don't continue scheduled drugs for chronic complaints.

The most difficult of all patients to manage are those with disabling chronic pain complaints. In general, narcotics play no role in their overall treatment. The goal of any physician involved in their care should be accurate delineation of the cause of the pain and the prescription of appropriate treatment. Only in rare instances will this require narcotics. The physician who allows the patient to manipulate therapy by choosing the narcotics and their amounts for whatever reason is providing inappropriate care and is placed at unnecessary risk for disciplinary or legal action. When narcotic prescription is indicated, the drug should be used according to established principles in doses that are appropriate and in ways prescribed by the physician. There is no excuse for allowing any patient to misuse controlled substances. Doctors often contribute to patients' problems by doing what they want. Drug-seeking patients can be persistent, manipulative, and extremely difficult to manage. The physician who is inexperienced in dealing with them is well advised to seek help when the first signs of drug-seeking behavior occur.

Narcotics do not play a major role in managing chronic pain. Conversely, their appropriate use in pain of cancer, postoperative pain, and severe injury is very important. Drug selection, proper dose scheduling, tolerance, and addiction are all factors of concern. Attention to a few details will be repaid by better pain control

for patients and fewer potential legal hazards for prescribers.

### Appropriate Use of Narcotics for Acute Pain

Narcotics remain the most important method for control of severe acute pain. The drugs should be given in appropriate doses for restricted periods. With severe soft tissue injury or fracture, the painful experience usually is limited from 48 to 72 hours if appropriate treatment has been instituted. Oral narcotics are usually satisfactory after the first dose. Codeine and oxycodone are appropriate choices. Remember that most narcotics are poor oral analgesics because of their lack of absorption. If more pain control is needed than can be obtained from these two drugs, Methadone 5 to 10 mg orally every 4 to 6 hours is the best alternative. The patient who denies analgesic effect from Methadone and asks for oral merperidine or morphine is probably looking for some effect other than analgesia. No one who is not knowledgeable about narcotics should use methadone.

There is virtually never a reason for continuing narcotics for more than one week after acute injury. Of course, it is possible to think of exceptions, but as a general rule, a one-week supply should be adequate. The patient who continues to request narcotics should be reinvestigated to be certain than the original process has healed. If so, there is no reason to believe that continued narcotic use is required.[3]

The most common acute pain problem requiring narcotics is postoperative pain. The usual method of treatment of postoperative pain is not particularly effective. Injectable drugs are administered at the patient's request by a nurse, usually every four hours. When the time between patient request, nurse compliance, and the lag time for the onset of analgesia are considered, it is estimated the average postoperative patient receives no more than 50 percent pain relief for two and a half of each four to five hours. Regular administration of a moderate dose of the narcotic every three to four hours for 48 hours is preferable to maintain a constant blood level.[2] Analgesia is greatly prolonged, and as long as the patient is examined regularly by the nurse, there is little fear of toxicity, except in the elderly or the particularly susceptible, such as the postcraniotomy patient. Adjuvant therapy, with a drug such as hydroxyzine (Vistaril) given at the same time, can prolong the analgesic effect and reduce postoperative anxiety. Most patients are pain free in one week. Narcotic use for more than two weeks is virtually never indicated.

### Appropriate Use of Narcotics in Cancer Pain

Most patients with severe pain complicating cancer and its therapy can be treated effectively with narcotics. Not to do so causes unnecessary suffering. The drugs are most useful in patients where the expected life-span is one year or less. Patients with longer potential survival should be considered for interventional pain-relieving procedures. For most with shorter life expectancy, the use of narcotics is the best alternative, and the drugs used should be oral. Codeine, oxycodone, and methadone are the best choices. Pain relief should be attempted with nonnarcotic analgesics; then a progression to codeine, oxycodone, and methadone (in that order) is desirable. The problem of physiological dependence is unimportant, but tolerance greatly limits the long-term use of narcotics. The best way to solve the tolerance problem is by changing drugs. The patient is allowed to escalate the dose of a particular drug as long as pain relief is achieved without undue side effects. When the manifestations of tolerance have reduced efficacy of the drug, it is time to change. Switching to a different narcotic, using approximately half the dose to which the patient has become tolerant, will often restore potency. By changing drugs periodically, it is possible to achieve long-lasting pain control.

It also should be remembered that anxiety and depression play a major role in cancer pain. The appropriate use of antidepressants and antianxiety agents often will greatly reduce the need for narcotics and sometimes completely obviate it.[3]

Some patients with cancer pain are best treated with the use of epidural or intrathecal continual administration of narcotics. A variety of small pumps and reservoirs are being developed for this still-innovative technique, but it shows great promise for the treatment of cancer pain without the need for large doses of narcotics. The efficacy of the technique is without question, but the safety for long-term use has not yet been established. For the short-term use required by most cancer patients oral medications suffice.

Cancer patients tolerate enormous doses of oral narcotics as long as escalation of dose is slow. Side effects, not absolute amount, should limit intake. Many physicians and nurses have an irrational concern about addiction in these patients and so limit or withhold narcotics. The goal must be pain relief, and this goal can be achieved without the concerns about addiction that are important in chronic pain of benign origin.

### Discussion

Drug therapy is still the mainstay for treatment for both acute and chronic pain.[1] There are general prin-

ciples of appropriate analgesic use: it is better to use nonnarcotic analgesics whenever possible. With acute pain states, such as postoperative pain, narcotic analgesics are indicated. The physician should use oral medications when possible and the lesser narcotics, such as codeine or oxycodone, when they are successful. Acute pain states rarely last for many days, and narcotics should not be continued beyond the time when healing is expected to take place. The patient should not be allowed chronic use of narcotics for an acute pain state.

The same general principles apply in cancer pain, except that patients with neoplastic disease may be maintained on narcotics for long periods. Oral narcotics are best, and judicious switching from one drug to another may be helpful. Despite considerable, almost fanatical support in the lay press, there is no indication that cocaine, heroin, or the cannabinoids have any advantage over other analgesic medications. The "cocktail" combinations of tranquilizing and analgesic drugs (such as the Brompton mixture) cannot be shown to be more useful than judicious, individualized use of the appropriate narcotics with adjuvants for diagnosed anxiety and depression. Nonspecific use of antianxiety depressant mixtures is less satisfactory.

Narcotic analgesics are used to manage severe pain. The dose should be individualized, and the route of administration should be chosen to provide the safest and most effective analgesia. No specific analgesic dose is effective for all patients, and it may be necessary to manipulate the dose significantly to provide pain relief.[2] It is appropriate to titrate the dose up or down to achieve pain relief without side effects. Narcotics should be administered regularly. Continuous pain requires continuous analgesia, but a fixed-dose level should not be established without optimization.

Narcotics have significant side effects. The most important are nausea and vomiting, sedation, constipation, and respiratory depression. Sedations and respiratory depression are best treated by reducing the dose and increasing the frequency of administration. Constipation is a long-term effect and can be treated with stool softeners. Nausea and vomiting are likely to be idiosyncratic, and while they can be treated with drugs, switching to another narcotic is more likely to bring relief.

Tolerance will occur. It means that a larger dose of narcotic analgesic is continuously required to maintain adequate pain relief. Tolerance occurs with physiologic dependence, but neither imply psychological dependence. Many health personnel confuse physiological with psychological dependence, and both nurses and physicians frequently withhold medication in the mistaken assumption that the patient will develop a psychological dependence quickly. Many postoperative patients suffer unnecessarily because of this misguided attempt to limit narcotic analgesia.

Several maneuvers can reduce the development of tolerance in patients who require long-term narcotic therapy. Narcotics may be combined with nonnarcotic analgesics. Nonopioid analgesics may be used in combination with narcotics. Switching narcotics with a starting dose of about half the projected equal analgesic dose is often effective since cross-tolerance between narcotics is not complete. Stopping the drugs for a short period and then restarting is sometimes effective.

Physical dependence almost always is developed with prolonged narcotic administration. Then abstinence will produce a characteristic syndrome in which the patient feels anxiety, irritability, nervousness, chills and hot flashes, salivation, lacrimation, insomnia, rhinorrhea, diaphoresis, piloerection, nausea, vomiting, abdominal cramps, and multifocal myoclonus. Usually, the abstinence syndrome occurs with relationship to the half-life of the drug taken. Most occur in the first 6 to 12 hours and peak at 24 to 72 hours. With long-acting drugs, the peak may be delayed to 36 to 48 hours. The abstinence syndrome can be avoided by slowly withdrawing the patient from the drug over 7 to 10 days.

Psychological dependence is a more serious problem. Drug use alone will not produce psychological dependence. Many other social, psychological, and environmental factors are operative; physician administration of narcotics does not produce the psychological dependence syndrome. Addicted patients require management by an expert, and referral to a substance abuse program of comprehensive pain management program is appropriate.

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# Elective Repeat Cesarean Section: Old Controversy, New Concepts

*CHARLES CANADY MD and PHILLIP J. GOLDSTEIN MD*

**Despite several reasons for repeat cesarean sections (tradition, fees, schedules, and most notably litigation and obstetricians' vulnerability) we challenge the notion of standardized elective repeat cesarean section and suggest the adoption of a mandatory trial of labor in those pregnancies for which it is not contraindicated.**

From the Department of Obstetrics and Gynecology, Sinai Hospital of Baltimore. Presented at the Maryland Obstetrical and Gynecologic Society competition for residents in June 1987, this paper received the Chief Resident Prize award.

E. B. Cragin wrote in his paper "Conservatism in Obstetrics,"[1] published in 1916, "a prudent obstetrician should adopt a philosophy of once a cesarean, always a cesarean." This dictum helped establish the elective repeat cesarean section as the standard care in the United States. Between 1920 and 1980, changes in surgical technique, availability of potent antibiotics, and advances in technology (including anesthesia) have challenged this custom. The support for vaginal delivery after cesarean section or trial of labor (TOL) began to emerge. However, most obstetricians continue to embrace Cragin's caveat, in part because advanced clinical skills and medical technology have markedly decreased the associated morbidity and mortality of cesarean section.

The compensation fee of cesarean section *vs* vaginal delivery is rarely mentioned but also may be influential in decision making. Another seldom discussed problem is the use of the physician's time, scheduling, and interruption of office hours. Such considerations are ultimately financial in nature. In addition, fear of legal repercussions in the event of uterine rupture during labor directs physicians to what seems a more prudent course, elective repeat section.

An article in *U.S. News and World Report*, "See You in Court"[2] summarizes just how litigious our society has become. This article states that the urgency to sue crosses all economic strata and all social groups. Employees sue bosses, children sue parents, bed partners sue one another, but the latest and most rapidly expanding group is the patient suing her obstetrician. Additionally, the number of attorneys has risen 150 per cent between 1960 and 1984. In more practical terms this translates to one lawyer for every 375 American citizens, and each of these lawyers intends to earn a living.

An obstetrician has only to look at his or her annual malpractice insurance premium ($30,000 or more in Maryland) to see the social forces at work and physician's vulnerability. We have been put in the unfortunate circumstance of changing our approach to patient management because of news about the trials of our peers in malpractice suits. Under such pressure practices change, habits change, and in turn modify standards of care. But a major problem is that these changes were not created by and are not supported by those individuals responsible for improving the quality of care. Such then are some of the explanations for the increased incidence of elective repeat cesarean section at the expense of the trial of labor.

In summary, some physicians feel the TOL procedure is too risky and the cost of a poor outcome too costly. We challenge the notion of standardized elective repeat cesarean section and suggest the adoption of a mandatory TOL in those pregnancies for which it is not contraindicated.

## Materials and Methods

Bottoms *et al.*, in his review of cesareans performed in the United States indicates that cephalopelvic disproportion (CPD) remains the most common reason for cesarean section.[3] Repeat cesarean sections, those done for breech presentations, and those done for fetal distress, respectively, are the next most common diagnoses. These four indications are the major reasons for the enormous increase in abdominal deliveries today. A recent national survey conducted by Shiono[4] suggested that the period from 1979 to 1984 showed an overall increase in cesarean section of 4.9 per cent.

At the Sinai Hospital of Baltimore, a community teaching hospital, the numbers of cesarean sections have almost doubled during the past ten years (Tables 1 and 2). Abdominal deliveries constituted 13.6 percent of the total deliveries in 1976 and 21.5 percent of the total deliveries in 1986. Some centers currently report a 30 percent cesarean section rate. It is inevitable that the progression of repeat cesarean section alone will increase these statistics as the current decade comes to a close.

**Table 1. Cesarean Sections at Sinai Hospital**

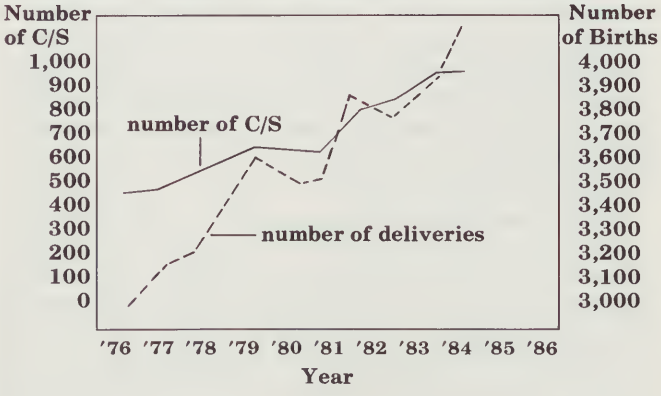


**Table 2. Sinai Hospital of Baltimore Delivery Census**

| Year | Number of Deliveries | Delivering by C/S (percent) |
|---|---|---|
| 1976 | 2,929 | 13.6 |
| 1977 | 3,140 | 13.8 |
| 1978 | 3,161 | 15.0 |
| 1979 | 3,365 | 15.6 |
| 1980 | 3,520 | 15.7 |
| 1981 | 3,439 | 16.7 |
| 1982 | 3,471 | 16.6 |
| 1983 | 3,766 | 18.9 |
| 1984 | 3,641 | 19.8 |
| 1985 | 3,828 | 20.8 |
| 1986 | 4,053 | 21.5 |

The increased cesarean section rate is associated with a decrease in maternal mortality rates. Williams (in 1921) reported a maternal mortality rate of 5.5 percent at Johns Hopkins for the period 1899 to 1920.[5] Later estimates by Verch placed it at 800 to 2,500 maternal deaths per 100,000 in the 1940s and 300 per 100,000 by the late 1950s.[6] In the next decade varying studies by Evrard,[7] Frigoletto,[8] and Rubin[9] placed the total maternal mortality rate at between 0 and 60 per 100,000. Rubin estimated the relative risk of maternal death is six times that of vaginal delivery.[9] Hemorrhage, sepsis, pulmonary embolus, and anesthetic complications are the leading causes of death due to abdominal deliveries.[10] Some issues have become clear despite these varying reported rates, which in part are related to not controlling for demographic differences. The fact remains that maternal mortality from all cesarean sections is about 0 to 10 per 100,000, or roughly 1 per 10,000 cesarean deliveries. This compares to the maternal death rate of 0 to 2.7 per 100,000 vaginal deliveries.[8–12]

Maternal morbidity is another concern and remains a major research focus in the obstetric literature. The causes/etiology of morbidity in cesarean section are exhaustive and include injury to blood vessels, uterus, bladder, and bowel. Postoperative complications include: endomyometritis, urinary tract infections, wound infections, postpartum hemorrhage requiring transfusions, pulmonary emboli, and dynamic or adynamic ileus. Certainly the formation of adhesive disease may compromise future fertility.

Febrile morbidity alone is a major risk associated with cesarean section. Gibbs,[13] concluded that the incidence of febrile morbidity was lowest among those previous cesarean section patients who subsequently delivered vaginally. The febrile morbidity rate was not significantly different from other patients without prior cesarean section delivering vaginally within the same institution. Among all patients attempting trial of labor, febrile morbidity was highest among those patients delivering by cesarean section. The rate in this group was not higher than those having a primary cesarean section in the same institution. The corollary to this is that the other causes of significant morbidity would most likely be reduced in the absence of repeat section. Boucher *et al.*[14] in their retrospective analysis suggest that a TOL in patients with a history of cesarean section was associated with less febrile morbidity, blood transfusions, and less antibiotic usage.

Fewer complications and decreased morbidity associated with vaginal delivery have led the obstetric community to acknowledge it as the safer mode of delivery. Lacking knowledge of the actual level of risks associated with TOLs has inhibited obstetricians from translating this knowledge into action. The question that arises from any woman expecting to undergo a TOL is, "Will my baby and I be safe?" What exactly is the major risk to the mother?

Those who believe TOLs are not safe often cite the most feared complication as uterine rupture. This major complication deserves a precise definition. Donnelly[15] and Franzoni proposed classic criteria. These researchers defined a bloodless dehiscence as a "separation of the myometrium not diagnosed or suspected prior to operation, not associated with significant bleeding, and resulting in no fetal or maternal complications." The uterine defects fulfilling these classic criteria were defined as "complete" ruptures if they were in communication with the peritoneal cavity and "incomplete" if there was a separation from the peritoneal cavity by the visceral peritoneum or broad ligament. The literature reveals vaginal examinations of these scar dehiscences have been left unrepaired without adverse sequelae.[16]

The risk of uterine rupture is largely dependent on the type of prior uterine incision. Dewhurst[17] in England concluded the risk of rupture in any patient is 4.7 percent prior to labor and 2.2 percent during labor. Patients with vertical uterine incisions were more likely to rupture. Muller[18] summarized multiple studies of TOL and concluded that 90 percent of uterine ruptures and 96 percent of perinatal deaths occurred in patients with classical incisions. These compare with 0.8 percent and 1.2 percent of uterine ruptures of transverse scars prior to and during labor, respectively.[19] Despite these probabilities, the maternal (and fetal death) rates are low. The maternal mortality rate is reported at 6.7 percent in those women with an unscarred uterus, and it approaches zero in the scarred group because of our increasing ability to recognize, respond to, and deliver quickly any mother with this feared complication.

There is every reason to believe a trial of labor is a

legitimate option. The increasing success rates probably reflect the more aggressive management of TOLs rather than selection bias. The review of the world's literature from 1950 to 1984 reports 9,472 trials of labor with 7,499 vaginal deliveries after cesarean sections.[20] The overall success rate is 79 percent. In light of this large volume of data we can state that given an adequate trial of labor at least 3 of 4 women can deliver vaginally after a previous cesarean section.

Paralleling the increase in cesarean section has been a drastic reduction in the perinatal mortality rates. There are those who argue that this is due (in part) to the more liberal use of cesarean section; although in some foreign hospitals where the perinatal mortality decline is equally significant, cesarean section rates are reported at 5 percent.[21]

### Regional Anesthesia

Fear of masking the pain of uterine rupture has led to the underutilization of regional anesthesia during TOLs. An additional concern involves the possibility of sympathetic paralysis blunting the response to hemorrhage associated with rupture. Hypovolemia of uterine rupture also might be mistakenly diagnosed as epidural associated hypotension. A review of several studies in this area does not bear out these fears. In studies conducted after 1980 over 600 patients[4–6,9,12,22,23] were reported and only two had complete ruptures of the uterus. The pain was masked in one where there was concurrent fetal distress, and timely intervention led to a good outcome. The other rupture occurred during attempted fundal pressure at delivery. These data support the use of regional anesthesia during TOL.

### Use of Oxytocin

Once the risks and benefits of a TOL are better defined and it is a more widely accepted alternative to routine elective repeat cesarean section, the use of oxytocin becomes a pertinent issue. Clinical evidence is lacking in support of oxytocin-induced contractions resulting in uterine pressure gradients more dangerous than those achieved without pitocin. Flamm *et al.*[24] and Paul[25] both support the use of oxytocin. They found no significant differences in oxytocin *vs.* nonoxytocin use groups for TOL with respect to dehiscence, transfusions, birth trauma, or neonatal outcome. A study done by Paul in 1985 consisted of 1,209 patients. Of these, 289 were given pitocin, with one uterine rupture resulting. The data from these studies seem to support the idea that the probability of vaginal delivery is slightly decreased. The probability of uterine rupture seems slightly increased in women with a prior cesarean section who receive oxytocin during labor, compared with similar women who do not. This difference is not statistically significant.

A new standard of care cannot be proposed without some guidelines. No physician could recommend a TOL in all patients. There are several factors as mentioned by Horowitz[19] that make a TOL less favorable. They include classical cesarean section, cesarean section with multiple incisions, inadequate bony pelvis, those with unknown types of scars or previous uterine rupture, or any other contraindications to a normal vaginal delivery.

Additionally, a TOL requires 24-hour anesthesia coverage, ability to do an emergency cesarean section, adequate nursing facilities, and electronic fetal monitoring.

### Summary and Conclusions

Today the elective repeat cesarean section remains a significant cause for the increase in cesarean section rates. Cesarean deliveries have been a standard of care perpetuated in the United States based on a history of a possible devastating outcome to both mother and fetus if a TOL occurred. These events occurred during an early stage of obstetric technology and development. The elective cesarean section is considered financially prudent by some obstetricians, possibly for practical reasons. The ease in scheduling and the desire to obtain an outcome for which he/she expects less litigious risk contribute as well. Although the perinatal mortality rate decline parallels the increase in c-section rates, a causal association has not been demonstrated. Maternal morbidity from a cesarean section though declining from earlier years is significant and becomes a reason for us to prefer vaginal delivery over cesarean section in the interest of giving the mother the best care. Presenting the possibility of increased morbidity and mortality to the mother may decrease her desire for elective cesarean section. Supportive and empathic interventions during the TOL will serve to decrease her associated anxiety. (The obstetrician's anxiety is a whole other issue.)

The complication of rupture of the uterus remains a catastrophic event. However, it is a rare complication of TOL and, in fact, common in those pregnancies without a uterine scar having instrumentation. The use of regional anesthesia to date has not been shown to be contraindicated in TOL, but future controlled trials will be necessary to resolve the issue. The likelihood of a TOL leading to a successful vaginal delivery is supported by a review of the world literature. Oxytocin increased the probability of a successful TOL, while not increasing to a significant degree the likelihood of complications. Finally, as obstetricians participating in the delivery of quality care to reproductive-age women we are obligated to give our patients optimal medical care,

based on scientific knowledge and tempered with humanity. The desire to do an elective repeat cesarean section should be looked on with the same skepticism one would consider for doing a primary cesarean section, purely because the mother requires it. For these reasons, medical indications should remain the only driving force for elective repeat section.

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# Editorial

## The Judicially Created Standard of Care


*JAMES G. ZIMMERLY MD, JD, MPH*


In the preceding article, "Elective Repeat Cesarean Section: Old Controversy, New Concepts," Drs. Charles Canady and Phillip J. Goldstein from Sinai Hospital of Baltimore present a compelling case for a trial of labor (TOL) in the patient who has had a previous cesarean section.

In a report prepared by Craig Tanio, Dr. Marc Manley, and Dr. Sidney M. Wolfe of the Public Citizen Health Research Group, released on November 2, 1987, the authors claim that approximately 455,000 infants were delivered by cesarean section unnecessarily in the United States during 1986. The Report suggested that an appropriate cesarean section rate would range between 12 to 13 percent and noted that Maryland had the highest rate among ten states for which figures were available.

Maryland allegedly had a 26.6 percent rate for 1986. Of other jurisdictions for which statistics were available, only the District of Columbia was higher with a 30 percent rate. Even within Maryland, the rate varied from 12.4 percent at Garrett County Memorial Hospital in Oakland to 42 percent at Kent and Queen Anne's Hospital in Chestertown. Greater Baltimore Medical Center in Towson led the Baltimore area with a 32.2 percent rate. The University of Maryland had the third lowest rate in the state and the lowest rate in the

Baltimore area with a C-section percentage of 18.5; this despite the fact that the University of Maryland Hospital is a neonatal referral center and would be expected to handle a higher proportion of high-risk births that might justify cesarean sections.

Individual obstetricians' C-section rates ranged from 0 to 54 percent. While the Health Research Group Report recognized that the ever-present threat of malpractice litigation certainly may have an influence on the cesarean section rate, the report suggests that the "way to solve the malpractice crisis in obstetrics is not by practicing bad medicine and performing more unnecessary C-sections."[1]

A mere two days after the *Baltimore Sun* published the Health Research Group's study, the newspaper ran an article discussing the case of *Brandon Robinson v. Provident Hospital et al.* It appears that Brandon was delivered by the vaginal route on April 6, 1985 with Apgar scores of 3 and 10. The youngster allegedly has been diagnosed as being mentally retarded, and in a settlement with the hospital and other defendants prior to a hearing before the Maryland Health Claims Arbitration Board, an agreement was reached that will provide upward of $1,650 a month for the rest of the youngster's life. This figure will increase 4 percent per year, and in addition the child received a cash settlement of almost $700,000. The plaintiff's attorney alleged that

> at least five medical experts reviewed the fetal monitoring strip and labor and delivery records and determined that the child suffered fetal distress and hypoxia during labor. They were of the single mind that the damage happened in the course of labor and should have been avoided.

The plaintiff's attorney allegedly maintains that the resident who delivered Brandon should have performed a cesarean section.[2]

It appears that obstetricians have painted themselves into a corner. In cases such as *Robinson*, there are the "five medical experts" who will provide expert testimony that, in retrospect, a cesarean section should have been performed to have avoided the brain damage. This places the obstetrician between the proverbial rock and a hard place. The obstetrician knows full well there will be litigation if a brain-damaged infant is delivered.

However, this coin does have a flip side. How about the thousands of patients identified by the Public Citizen Health Research Group who allegedly have had unnecessary cesarean sections and who have suffered the attendant morbidity that occurs at a higher rate in patients who undergo cesarean section than in those who deliver vaginally?

It is almost universally acknowledged that there are an excessive number of cesarean sections being performed in Maryland as well as elsewhere. Leaders in the field of obstetrics, such as Drs. Canady and Goldstein, as well as the 1980 consensus panel from the National Institute for Childhood Disease and the American College of Obstetrics and Gynecology guidelines recommend increased use of a trial of labor among selected women who have had a prior cesarean delivery, at least in those hospitals that are appropriately staffed and set up for such deliveries. Perhaps these recommendations coupled with a little litigation on this other side of the coin may be able to stem the ever-rising number of "unnecessary" cesarean sections.

Unfortunately, while prestigious obstetricians and professional society groups may advocate a trial of labor prior to a repeat cesarean section, many years may pass before these scientific advances find their way to litigation and possible appeal. During these years of evolving changes in the standard of medical practice, the physician on the firing line has little guidance in gauging his or her potential liability for use of the recommended trial of labor technique. Meanwhile, the law books are full of cases condemning physicians who have failed to perform a timely cesarean section. It is likely that few physicians, and even fewer liability insurers, will have the stomach to challenge this "judicially created standard of medical practice."

This particular physician probably would take his chances with an increasing cesarean section rate and would turn a deaf ear to those who proclaim it is only the complicated vaginal delivery that must be relegated to a cesarean section. Unfortunately, the diagnosis of a complicated delivery is a postpartum diagnosis, which I don't know that I've been there until I've been there and then it's too late. Those of us who can't stand the heat of making difficult clinical decisions such as these on a regular basis find other avenues for our talents. We write about the problems.

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# Eosinophilic Meningitis

*FRED J. HELDRICH MD and PRADEEP P. GARG MD*

**Eosinophils in the cerebrospinal fluid have been associated with many causes. Although the finding of eosinophilic pleocytosis in cerebrospinal fluid is rare, helminthic infections are one of the more likely causes worldwide. We report a case of eosinophilic meningitis with a favorable outcome, secondary to Toxocara infection.**

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Eosinophils in the cerebrospinal fluid have been associated with infections caused by parasites, Mycobacterium tuberculosis, spirochetes, rickettsiae, viruses, and fungi as well as intracranial prostheses, injection of dye, demyelinating diseases, and lymphoma. Although the finding of eosinophilic pleocytosis in cerebrospinal fluid is rare, helminthic infections are one of the more likely causes worldwide. In the United States, the tissue nematodes, *Toxocara canis* or *Toxocara cati* are the helminths most frequently associated with central nervous system involvement in children.[1,2]

## Case Report

A seven-year-old white female was admitted because of generalized weakness and an inability to sit or stand. Previously healthy and attending school, her illness had begun four weeks prior to admission with one day of fever to 40.5°C, neck pain, and backache. These symptoms resolved spontaneously, and she continued her normal activities. Three weeks prior to admission, she had a recurrence of these symptoms for 24 hours. Two weeks prior to admission, she developed fever of 39°C. and again complained of neck, back, and abdominal pain. She was also lethargic.

Following a seven-day course of penicillin, she became afebrile and continued going to school, although she complained of feeling weak and continued to experience pain in her neck, upper back, and abdomen. Lethargy continued and she developed an unsteady gait. Weakness progressed, forcing her to remain home, and two days prior to admission, she was bedridden, unable to sit or stand. Her appetite had decreased, and she was thought to be losing weight. She lived in the country, and there was a history of exposure to dogs but no history of trauma, toxin exposure, ingestion, pica, tick bite, or exposure to known infection. She had been completely immunized for diptheria, tetanus, pertussis, rubella, rubeola, mumps, and poliomyelitis.

Physical examination revealed temperature of 37° C, pulse 82 per minute, respirations 16 per minute, and blood pressure 105/76 mm Hg. Her weight was 10th percentile; height, 25th percentile. The child's skin was clear, and there was no adenopathy. Ears, nose, and mouth were normal; neck was supple; lungs were clear; heart sounds were of good quality and without murmurs. Her abdomen was soft with no organomegaly, and she had normal genitalia of a prepubertal female.

The patient was oriented and cooperative, but responded slowly to questions with mild dysarthria. Positive findings on the neurological exam included bilateral horizontal nystagmus and mild weakness of the tongue, but no tongue deviation. Proprioception, light touch, vibratory, and pinprick were intact. Finger opposition was weak. Finger-to-nose testing was performed poorly and hesitantly. The muscle strength was reduced symmetrical and was graded 4/5 for muscles proximally, and 3/5 for the muscle groups distally. The DTRs were 2+ bilaterally. There were bilateral Babinski reflexes. When supported, she could only take a few shuffling steps.

Laboratory studies revealed: hemoglobin 13.4 gm/dl, hematocrit 39%, WBC count 7,700/cmm with a differential of 69% polymorphonuclear leukocytes, 2% band forms, 24% lymphocytes, 2% monocytes, 2% eosinophils, and 1% basophiles. Platelet count 374,000/cmm. Erythrocyte sedimentation rate 18 mm/hr. Serum sodium 139 mEq/L, potassium 3.8 mEq/L, glucose 82 mg/dl, urea nitrogen 13 mg/dl, and ammonia 61 mcg/L. Cerebrospinal fluid: glucose 67 mg/dl, protein 42 mg/dl, and LDH 5 U/L. Antigen screen for Hemophilus influenzae, Streptococcus pneumoniae, and Neisseria meningitides was negative. Gram stain was negative. There were 3 RBC/cmm and 130 WBC/cmm with 41% lymphocytes, 8% monocytes, and 51% eosinophils. Cultures of blood, urine, and cerebrospinal fluid were negative.

Multiple examinations of stool for ova and parasites were negative. Cold agglutinins, mono spot test, serologic test for syphilis, and intradermal skin test for tuberculosis were negative. Serum immunoglobulins were IgG 1200 mg/dl, IgM 170 mg/dl, IgA 230 mg/dl, IgE 110 U/ml. C-3 160 mg/dl and C-4 35 mg/dl. Computerized axial tomography of the head (enhanced and nonenhanced) was negative. An electroencephalogram showed slowing symmetrically. No rise in titer was recorded for coxsackie, adeno, or Echo viruses. Titers for Angiostrongylus, Cystosarcosis, and Trichinella were negative. Titers in the serum for toxocara done by enzyme linked immunosorbed assay (ELISA) was 1:1024; in the CSF, 1:4.

Both ampicillin and chloramphenicol had been started on admission, but were discontinued after 48 hours. On the fifth hospital day, a repeat examination of CSF revealed 53 WBC/cmm with 51% eosinophils. On the fourteenth hospital day, the CSF contained 14 WBC/cmm but no eosinophils. There was slow, pro-

gressive improvement in muscle strength; and after two weeks' hospitalization, she was ambulatory with the use of crutches. One month after discharge, her examination was entirely normal, and she was back to normal activity.

## Discussion

*Toxocara* infestation in man begins with ingestion of the embryonated eggs.[3] Larvae emerge from the eggs while in the intestine, penetrate the bowel wall, and then are dispersed to other organs via the portal blood supply. The larvae cannot complete their life cycle in man, but cause granulomatous reactions in tissues to which they are carried. Tissues most commonly affected are the liver and lungs; although the eye, skin, skeleton, urinary bladder, myocardium, and brain may be the site of involvement. Clinical manifestations probably depend on the number and location of invading larvae but include fever, malaise, anorexia, irritability, and pallor. Pneumonitis, hepatomegaly, and a migratory skin rash frequently are found.

Some of the more important signs associated with *Toxocara* (notably peripheral eosinophilia, pneumonitis, and hepatosplenomegaly) were lacking in our patient. This has also been noted by Brown[4] and Zinkham[5] in patients who have ocular involvement secondary to *Toxocara.*

Invasion of the central nervous system by *Toxocara,* although infrequently described, has been demonstrated either by autopsy material or by serologic evidence. Mikhael *et al.* found four reported cases of autopsy proved cerebral involvement by *Toxocara canis* up to 1974, and reported the fifth case.[6] In three of the cases, although granulomas with nematode larvae were found in the brain, death was not attributed to the nematode invasion. In the other two cases, death was believed to be secondary to an encephalitis. In each of these two patients, areas of granulomatous inflammation with a nematode in the center were demonstrated in the cerebrum, cerebellum, and brain stem.[6,7] In none of the five cases was eosinophilic pleocytosis of the cerebrospinal fluid mentioned.

Nonfatal meningitis, myelitis, and meningoencephalomyelitis secondary to toxocara infection have been reported.[8–11] All patients except one[11] had both a peripheral eosinophilia and eosinophils in the cerebrospinal fluid. The patient who did not exhibit eosinophils in the cerebrospinal fluid may have had the specimen obtained after the eosinophilia had resolved. In our patient, the WBC/cmm in the cerebrospinal fluid decreased from 132 to 14 in two weeks, and the percentage of eosinophils fell from 51 to zero.

Direct invasion of the nervous system by larvae may explain the neurologic symptoms in some cases; however toxins produced by the larvae may explain the neurologic symptoms in others.[1,3] Without histologic studies, it is impossible to be certain of larval infestation in neural tissue. In one reported patient with eosinophilic meningitis, cerebral angiography and radionuclide brain scans were performed;[9] and in ours, enhanced and nonenhanced computerized axial tomography was done, with failure to identify a lesion in either case. In the absence of tissue diagnosis, the ELISA test is considered to be the most accurate diagnostic method available.[3,12]

It has been reported that eosinophilic pleocytosis in the cerebrospinal fluid is more likely to occur early following invasion of the central nervous system by helminths, before the disease becomes localized.[2] Thus, eosinophils in the cerebrospinal fluid may play a protective role. They are known to inactivate mediators released from mast cells and to damage the larval stages of some helminths. Eosinophils also may be involved in the development of immunity to some parasitic infections.[13] Eosinophilic pleocytosis in cerebrospinal fluid has been found in patients who recovered.

## Summary

Our case report documents an additional instance of eosinophilic meningoencephalitis associated with *Toxocara* infection. Diagnosis was made by enzyme linked immunosorbent assay (ELISA). The patient's recovery was complete.

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# Maryland's Approach to Regulating Physician Office Laboratories

*JOHN M. DeBOY DrPH, ANA MARIA COLWILL MA, and EDITH J. MOULTON MS*

**Maryland began regulating medical laboratories in 1924, but the first law and regulations affecting physician office laboratories were not passed until 1966 and 1985, respectively. Statutory amendments passed by the Maryland General Assembly in 1986 assisted the further development and implementation of a full regulatory program based on licensure, exceptions to licensure, minimum technical standards, on-site inspection, physician surveys, and proficiency testing. Remaining concerns include proper interpretation of the law and regulations when dealing with the plethora of newly evolving decentralized laboratories found in HMOs, CHCs, and IPAs.**

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Physician office laboratories (POLs) in the United States are no longer the neglected stepchildren of outpatient medical care. They now perform half of all outpatient clinical laboratory procedures, accounting for more than a quarter of all laboratory tests. Recent rapid growth in the number and size of POLs has led states and the federal government to examine them with an eye toward regulation because as POLs expand in test volume and scope, many clinician-directors face new challenges they are not qualified to meet. Many POLs initially lack basic laboratory requirements such as standard operating procedure manuals and quality control programs. In addition these laboratories all too often employ poorly or minimally trained personnel to perform laboratory tests. Maryland is one of 13 states now regulating POLs. Currently about 200 POLs in the state are subject to licensure, and around 2,000 licensed physicians in Maryland are subject to laboratory proficiency testing requirements.

The authority to regulate physician office laboratories, whether at federal or state level, is derived primarily from statutes passed by Congress or a state legislature, and secondarily both from administrative regulations under the statute and from administrative decisions required to implement the statute. Regulatory programs resulting from this authority differ in many ways, ranging from those that are comprehensive, with broad authority, complex regulations, and a full set of minimum quality assurance standards to those that are narrow in scope, with little authority and few regulatory requirements. Some programs mandate on-site laboratory inspections, a license, and proficiency testing. Others require only annual registration. Some may enforce the same requirements among all POLs while others grant liberal exemptions to entire classes of POLs. We briefly review some of the different approaches the federal and various state governments have taken toward regulating POLs and then take a close look at Maryland's POL program: its existing law, regulations, limitations, and some continuing regulatory concerns.

## Federal and State Approaches

Federal authority to regulate medical laboratories stems from provisions of the Social Security Act that established the Medicare Program.[1] Most POLs are exempt from Medicare regulations because the Act's empowering statute does not formally authorize their regulation. However, it establishes reimbursement limitations for laboratory services based on the type of laboratory being operated. A POL is not subject to Medicare certifications as an independent laboratory if the POL:

- is operated and used only by attending or consulting individual or group physicians;
- is maintained only for the individual physician or group's own patients;
- does not solicit or advertise itself as available for referral testing; and
- does not accept more than 99 specimens on referral in a given specialty over a calendar year.[2]

A POL that fails to meet any of these criteria fits the definition of an independent laboratory, requires Medicare certification, and is subject to all federal quality standards and regulations.[3]

In addition to the limited, indirect regulatory approach of the federal government, 13 states (including Maryland) have passed statutes authorizing the regulation of POLs. Like the federal government, most of these states "exempt" or "except" individual physicians from any licensure requirement if he or she performs tests solely for his or her own patients. These same states base their licensure requirements on the number of physicians in a group practice or incorporated POL.

The size of a group practice that leads to POL licensing by states ranges from three or more physicians in Massachusetts and Wisconsin to six or more in Florida and Michigan. Pennsylvania and Wyoming base their licensure requirement on the number and type of tests performed rather than on the number of physicians in a group practice. Following a slightly different ap-

proach, Idaho regulates POLs if POL personnel other than the physicians perform tests. Aside from licensure and blanket exemptions to it, other state approaches to regulation of POLs can involve annual registration, a wide range of minimum quality assurance standards, personnel requirements, proficiency testing, or a combination of these approaches. Proficiency testing refers to the ability to perform laboratory procedures within acceptable limits of accuracy through analysis of unknown specimens distributed at periodic intervals by an external source. Proficiency testing standards in most states follow closely those established by the federal government for independent laboratories.

### Maryland's Statutory Approach

In 1924 a four-line law [then Article 43 (Health), Section 37] authorized the State Board of Health to establish minimum laboratory standards and qualifications for all private laboratories in Maryland except those in Baltimore City. In 1939 the Board of Health adopted initial regulations (later given the designation 43J02) requiring registration of any medical laboratory in the counties. A revision of 43J02 in 1948 established minimum standards for these same laboratories.[4] In 1965, House Bill 637 extended the medical laboratory law [then Article 43 (Health), Section 34] to include Baltimore City. In 1966 the General Assembly amended Article 43 (Health), Section 34 to require the Board of Health and Mental Hygiene to inspect and issue permits to operate medical laboratories. It also required "any person, partnership, association, or corporation desiring to operate or maintain such a laboratory, except a physician performing laboratory examinations on his own patients" to apply for the permit.[5]

By the mid-1970s the General Assembly amended Article 43 (Health), Section 34 to exempt group practices of fewer than four physicians that perform laboratory examinations limited to their own patients. This amendment also added a new laboratory proficiency testing requirement for all physicians.[6] Currently Maryland's authority to regulate POLs stems from three mandates defined in Health-General Article, Title 17, Subtitle 2 of the Annotated Code of Maryland.[7] The first requires a group practice consisting of four or more physicians performing laboratory examinations for their own patients to obtain a state permit to operate a laboratory. The second requires all individual physicians and group practices performing laboratory examinations to demonstrate satisfactory performance in a state-approved laboratory proficiency testing program. The third requires there be administrative regulations to further explain and implement the first two mandates.

In 1986 House Bill 198 amended these mandates. As a result, Maryland's POL statute now allows exceptions to the permit (license) requirement for group practices of four or more physicians if one or more physicians in the group personally perform laboratory examinations solely for the group's patients, and if the group continues to meet all proficiency testing requirements. Groups of four or more physicians that meet the above criteria and employ nonphysicians who perform (or help perform) laboratory tests also may qualify for an exception if the group's test menu is limited to one or more of the simple, routine tests designated by the Laboratories Administration, DHMH, as currently exempt from proficiency testing requirements.

The 1986 amendments to the medical laboratory statute also provided the authority to develop and maintain a list of laboratory tests that are exempt from the law's proficiency testing requirements. A test is designated as exempt from proficiency testing because either the Laboratories Administration has deemed the test to be exempt or no adequate proficiency test exists for the test. We emphasize that **no physician** in Maryland performing an in-office laboratory test is exempt from proficiency testing; only certain laboratory tests are exempt. In addition, the nature of the list of exempt tests requires that it be reviewed and updated annually. (A circular listing all proficiency testing requirements, definitions, approved testing programs, exempt tests, and performance evaluation procedures may be obtained from the Laboratories Administration, DHMH.)

### Maryland's Regulatory Approach

Maryland's regulations covering physician group practice laboratories (Code of Maryland Regulations 10.10.06)[8] deal with administrative procedures and technical standards. The primary objectives of these regulations are to provide POLs with a set of easily understood, somewhat flexible, minimum laboratory standards, and to provide the state with an efficient means of implementing and enforcing those standards. Surveying all practicing physicians in Maryland to identify those who perform in-office laboratory tests also has become a major administrative responsibility of the Laboratories Administration.

Since many physicians are unfamiliar with quality control as it relates to the operation of a clinical laboratory, Maryland's regulatory mission emphasizes education and training as well as enforcement. As soon as a request for a permit is received, application materials and a copy of the POL regulations (COMAR 10.10.06) are mailed out. The POL is then given time to implement the personnel and technical standards before an initial on-site inspection is scheduled. If a

POL is satisfactorily meeting all standards at the time of initial inspection, a 12-month permit is issued. If all the standards are not being met, but the laboratory surveyor believes they are being implemented in good faith and soon will be met, a 90-day provisional permit may be issued. In most cases POLs with a provisional permit are reevaluated within the 90-day period, are found to comply with all permit requirements, and are issued an annual permit.

Prior to the initial inspection and during any provisional permit period, the POL is given whatever help the Laboratories Administration can provide. However, primary technical preparations and any personnel training a POL must undertake to satisfy permit requirements must be provided by the POL's director and supervisor. The director of a licensed POL in Maryland is a physician-member of the group practice who has been designated "director" by the group. This physician is also listed as the director on any state permit; he or she has the ultimate responsibility for all laboratory test results and the competence of laboratory technical personnel. To help directors oversee the operation of expanding clinical laboratory services, the regulations require that a POL employ or otherwise engage on a full or part-time basis the services of at least one medical technologist who can provide the POL with sufficient clinical laboratory expertise both to initially meet and to maintain the minimum standards.

In addition to these personnel requirements, Maryland's regulations include a number of technical sections. A safety section calls for the development and maintenance of a basic safety manual. A facilities-and-equipment section requires that applicable state and local laws be met and that laboratory equipment receive necessary preventive maintenance. A quality control section requires and explains standards covering the standard operating procedure manual (SOPM), the operation of equipment, the handling of reagents and supplies, and proficiency testing. Since the SOPM is a POL's most important operational document, the section covering it contains the most detailed standards. The SOPM is also the document that receives the most attention from the state's laboratory surveyors during on-site inspections. A poorly prepared SOPM can be a major obstacle to licensure.

## Continuing Regulatory Concerns

The General Assembly's 1986 amendments made Maryland's POL law and regulations much more useful and effective, but a number of shortcomings remain. One of these is the definition of a physicians' group practice laboratory:

> "Physicians group practice laboratory" means a laboratory operated collectively by four or more physicians, licensed to practice medicine in the State, practicing as a group, and performing examinations in one or more scientific disciplines, . . . on material derived from their own patients. If tests are performed for patients of physicians outside the group practice, the laboratory is considered a medical laboratory and the requirements for a medical laboratory under COMAR 10.10.01 apply.[8]

This definition is long and complex but not fully effective in explaining when a group practice POL ceases being a POL for regulatory purposes. Further complicating the definition are recent developments in laboratory medicine that have led to a plethora of decentralized laboratories developing and evolving within such entities as health maintenance organizations (HMOs), walk-in clinics, community health centers (CHCs) and individual practice associations (IPAs). Although these entities usually meet the regulatory definition of a group practice, sometimes a question arises as to whether an individual entity even should be licensed and, if so, whether by the state as a POL or by the federal government as an independent laboratory.

A number of HMOs in Maryland have begun to hire or contract with groups of fewer than four physicians that offer an in-office laboratory service. As long as an individual group performs testing only on patients seen by that group's physicians, these HMO-associated groups can legitimately claim they do not require licensure. However, if HMO-associated group "A" accepts and tests any specimens of patients from HMO-associated group "B", then group "A" is required to seek state licensure as a medical laboratory.

Maryland's definition of what constitutes a "medical laboratory" is more stringent than the federal government's definition of what constitutes an "independent medical laboratory." The latter allows a POL to accept up to 100 specimens in a given laboratory discipline per calendar year, from other than its physicians' own patients without having to apply for Medicare certification. Maryland's definition requires a POL to seek licensure as a medical laboratory if the POL accepts or tests any specimen or specimens other than those of their physicians' own patients.

Walk-in clinics and CHCs also must be aware of their limitations in performing laboratory services. In many cases a CHC or walk-in clinic's laboratory can be treated by the state as though it were a POL. Any physician employed by the clinic may request in-clinic tests on patients personally seen by him or her. However, clinics may not perform laboratory examinations (except a test for pregnancy) on specimens from patients who have not been seen by a clinic physician without first obtaining a state permit to operate a medical laboratory.

Some IPAs include scores of physicians who each own a share of the association and send their patients to the association's own laboratory. Aside from ethical implications of large-scale self-referral, this type of arrangement can pose a number of regulatory problems. One occurs when an IPA claims that all its physicians belong to a group practice and seeks licensure of its laboratory as a POL rather than as a medical laboratory. To license the laboratory of a group with scores of physicians would appear to stretch the POL law far beyond the law's original intent. Taken to its extreme, if a large IPA with a laboratory could be licensed as a POL, why couldn't a physician-owned hospital laboratory also be licensed as a POL? There is no reason large laboratories owned by physicians and at sites distant from the physicians should be subject to fewer quality checks and less regulation than the state's medical laboratories.

A second regulatory problem involving IPAs concerns equitable application and enforcement. Maryland has a number of large physician associations that encompass a licensed medical laboratory. At least one of these associations contains a group of four or more physicians who operate their own in-office laboratory. This group's physicians have claimed their POL does not require licensure separate from their IPA laboratory's license. However, the association's licensed medical laboratory has not attempted to include any in-office laboratories as satellite laboratories under its medical laboratory license. Therefore the in-office laboratory is not covered by the associations' laboratory license. Such in-office laboratories are considered to be operating on their own and are being required to seek individual state licenses to operate a POL.

In many cases Maryland's POL law and POL regulations are clear and readily enforceable; but in some cases both the state's physicians and regulators are entering uncharted legal territory where there are few, if any, precedents and no simple answers. As with any newly regulated area, it probably will be many years before most of the answers will be readily available. Until that time the State of Maryland should continue to apply the law and its regulations not only to the advantage of the public but also, where appropriate, to the advantage of the regulated POLs.

### References


1. 42 U.S.C. §1395 *et seq.*
2. Anonymous. "The Certification Process: Determination of Independent Status B-D." *Medicare State Operations Manual.* Washington, DC: HCFA, 1985, pp. 2-82—2-85.
3. 20 C.F.R. §405.1310 *et seq.*
4. Md. Ann. Code art. 43, §34 (1948)
5. Md. Ann. Code art. 43, §34 (1966)
6. Md. Ann. Code art. 43, §34 (1073)
7. Md. Health Gen. Code Ann. §17-201 *et seq.* (1982)
8. Md. Admin. Reg. 12(23):2217(1985).



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# Counter-Counterpoint: Scan!

*HUBERT S. MICKEL MD*

Although the questions posed in the recent editorial, "Counterpoint: To Scan or Not to Scan"[1] were rhetorical, answering them would help clarify the intent of the article, "Point: Guidelines for Emergency CT Head Scans."[2] In the latter, guidelines were proposed for emergency noncontrast CT scans of the head for patients presenting on an emergency basis in four clinical categories:

- Following head injury
- Following onset of focal neurological signs, including changes in mental status
- Following a first seizure
- Following the onset of a severe headache

For purposes of discussion, each proposed guideline for emergency CT head scan questioned in the editorial will be stated first, followed by the query posed in the editorial and my response.

According to the proposed guidelines, a CT head scan was recommended following head trauma with the history of unconsciousness or altered consciousness.

*The question was:* "Do we order CT Scans on all patients who give us equivocal comments when we are reasonably certain most of those patients did not lose consciousness according to the medical definition of the term?" The answer: Certainly not!

However, the answer is Yes!

- IF the presenting complaint to the Emergency Department is a well-documented head injury, or
- IF by history the head injury can not be determined to be minimal, and
- IF follow-up and observation following discharge is doubtful.

When the history of unconsciousness remains uncertain, it is helpful to ask the patient to recall the impact of striking his or her head and the events surrounding the injury. If a patient remembers the incident, there certainly is no retrograde amnesia, a clinical finding common with concussion.

The proposed critera for emergency CT head scan after head injury is for patients who might not otherwise be admitted to the hospital. Patients who are admitted to the hospital and who will be under close observation need not have an immediate CT head scan even if they have suffered a documented period of unconsciousness, so long as they remain neurologically stable.

A CT head scan also was recommended for any patient for whom observation following discharge for a head injury might not be adequate and for whom hospitalization is not otherwise indicated.

*The question was:* "Does this include a CT on every elderly patient who comes to an emergency department for repair of a scalp laceration if that elderly person lives alone or with another elderly spouse or will be returning to a nursing home?" The answer: Certainly not!

However, the answer is Yes!

- IF the presentation to the emergency department is for head injury rather than scalp laceration, and/or
- IF the scalp laceration is serious enough to raise questions of possible skull fracture or other head injury, and/or
- IF the head injury is serious enough that one does not feel comfortable discharging the patient without providing head injury instructions.

Head injury instructions given to patients who will not be well observed are of little or no value. In this circumstance, a CT head scan is helpful and is less expensive than admission.

Also, patients with cerebral atrophy (such as the elderly) are more vulnerable to complications from head injury, especially a subdural hematoma, which can result from tearing the bridging veins from the cortex across the dura mater.

A CT head scan was recommended for patients with head injury with a high risk of subsequent head injury.

*The questions were:* "Who pays for this defensive medical practice? Does the emergency physician gain in any way? Does the physician benefit by a decrease in his/her liability insurance cost by ordering CT scans on all these patients?"

The answers are that obtaining a CT head scan under these circumstances is important and that it is the patient who stands to gain. Providing quality medical care is cost effective in itself, as will be elaborated upon later.

Patients with a high risk of subsequent head injury also have a high risk of previous head injury. For instance, my last year of training in neurology was in neuropathology at the Boston City Hospital under Denny-Brown. In a large population of alcoholic patients, it was quite common at autopsy to find membranes from a resolved subdural hematoma. Patients carrying a small subdural hematoma are at considerably greater risk of serious sequelae following another head injury. To complicate the problem further, alcoholic patients frequently have a bleeding diathesis resulting from liver damage.

Similarly, patients with poor seizure control need to have more frequent CT head scans than those whose seizures are well controlled, especially if repeated head injuries are associated with the ictal episodes. With a head injury during a seizure, it is difficult to determine whether the alteration of consciousness is from the seizure, the head injury, or both.

A CT scan was recommended for a patient following a first seizure for whom discharge from the Emergency Department is planned, if there is any question of patient compliance or adequacy of follow-up.

*The question was:* "I may question the compliance of many patients I discharge in the wee hours of Saturday night or Sunday morning. Do I obtain a CT scan on all of them to protect myself or do I do it because they are not capable of protecting themselves?" "This suggestion is that I protect the noncompliant or unreasonable patient from themselves."

The answer is that an emergency CT head scan definitely should be obtained on any noncompliant or unreasonable patient suffering a first seizure, especially if the seizure is unrelated to drugs or alcohol. A noncompliant, unreasonable, first-seizure patient probably should be admitted. A thorough diagnostic work-up is indicated following a first seizure, although a noncontrast CT head scan will suffice on an emergency basis to determine the presence of a critical structural process.

Abnormal postictal behavior might well be related to the same underlying pathological process that caused the seizure. Similarly, a patient who experiences a drug- or alcohol-induced seizure also should have a CT head scan if the mental status remains abnormal when the patient is no longer intoxicated. If the emergency physician finds resistance to obtaining a CT scan or to admitting the patient in the middle of the night, such a patient should not be discharged. When there is suspicion of an underlying neurological disorder that might impair mental ability to follow through, the emergency physician should accept the responsibility for securing subsequent care if the patient is discharged. For these reasons, an emergency CT head scan is of prime importance for a first-seizure patient of questionable compliance, if discharge is planned.

A CT head scan was recommended following the onset of a severe headache in any patient who might have a subarachnoid hemorrhage. The statement (instead of a question) was that "This includes all patients with severe headache because any one of them *might* have a subarachnoid hemorrhage, even those who have a lengthy history of migraine."

That statement is *affirmed*, emphatically, but *only* IF the headache is *severe* and no other cause is determined.

Subarachnoid hemorrhage characteristically has an abrupt onset and is described as the worst headache in the patient's life. Words used to describe the headache, such as "exploding," "worst in my life," "sudden onset," should be red flags to the emergency physician. Other etiologies can be responsible for such a headache, but if the emergency physician is unable to attribute the headache definitively to one of these other etiologies, then an emergency CT head scan is indicated.

In the case of *Polischeck vs the United States of America*, I served as an expert witness for the US government. I stated that although my management would have been different for the patient (who died from a subarachnoid hemorrhage), most emergency physicians would have failed to request a CT head scan or to arrange for neurosurgical consultation. The decision was made for Polischeck not on account of the emergency physician's failure to obtain a CT scan or consultation but because the naval hospital involved had medics rather than physicians providing the initial primary evaluations. However, if subarachnoid hemorrhage had been considered at the first visit and the patient transferred for CT scan or referred for consultation, there would have been a reasonable chance for survival. If the many illustrious neurosurgeons who testified for the plaintiff and I, myself, would have ordered a CT head scan, why should this not be the standard of care?

A CT head scan was recommended for any patient who has or might have meningitis and in whom there is a possibility of brain abscess. The CT scan should precede the lumbar puncture in a patient suspected of having meningitis only in those patients for whom it is considered to be clinically advisable because of concern of herniation resulting from brain abscess or edema.

*The questions were:* "How do I practice at a small community hospital that does not have the ready availability of a CT scanner? Do I delay the lumbar puncture in those cases in order to transfer the patient to a medical center for the CT scan if I suspect increased intracranial pressure?"

The answer is *emphatically Yes*! A patient who presents with bilateral papilloedema, altered mental state, and possibly mild hemiparesis should not have a lumbar puncture, even if meningitis is strongly suspected, until a noncontrast CT head scan is obtained. A lumbar puncture might result in the patient's rapid demise. Such a patient needs a neurosurgeon immediately and certainly before an additional crisis is created from herniation occurring as a consequence of a lumbar puncture.

The statement is made that "The business manager will have the emergency physician's head scheduled for a CT scan when his profile indicates that he orders 100 CTs a month with only two positive scans on the average."

That example, albeit extreme, is certainly better than the emergency physician who orders only 50 CTs a month, finding one positive scan but missing one.

*The question was posed:* "At what level does the yield

justify the additional negative scans?

This question has no easy answer, but the following example can provide perspective. Through the free exercise of "clinical judgment," an emergency physician decides that at 2 a.m. the patient's severe headache does not warrant obtaining a CT head scan. The emergency physician is shown subsequently to be wrong, and the patient dies. The court decides on a modest settlement of $500,000. That amount pays for 2,000 emergency CT head scans. Even if the emergency physician is not specially trained in the evaluation of neurological disorders, it is likely that one would obtain significant positive findings long before the 2,000 scans are used. What is most important is that a life is saved.

Hence, the proposed guidelines for emergency CT head scans can be considered both cost effective as well as a guide for providing quality emergency medical care.

### References


1. Zimmerly, J.G. "Counterpoint: To Scan or Not to Scan." *MMJ* 36(1987):858–59.
2. Mickel, H.S. "Point: Guidelines for Emergency CT Head Scans." *MMJ* 36(1987):857–58.



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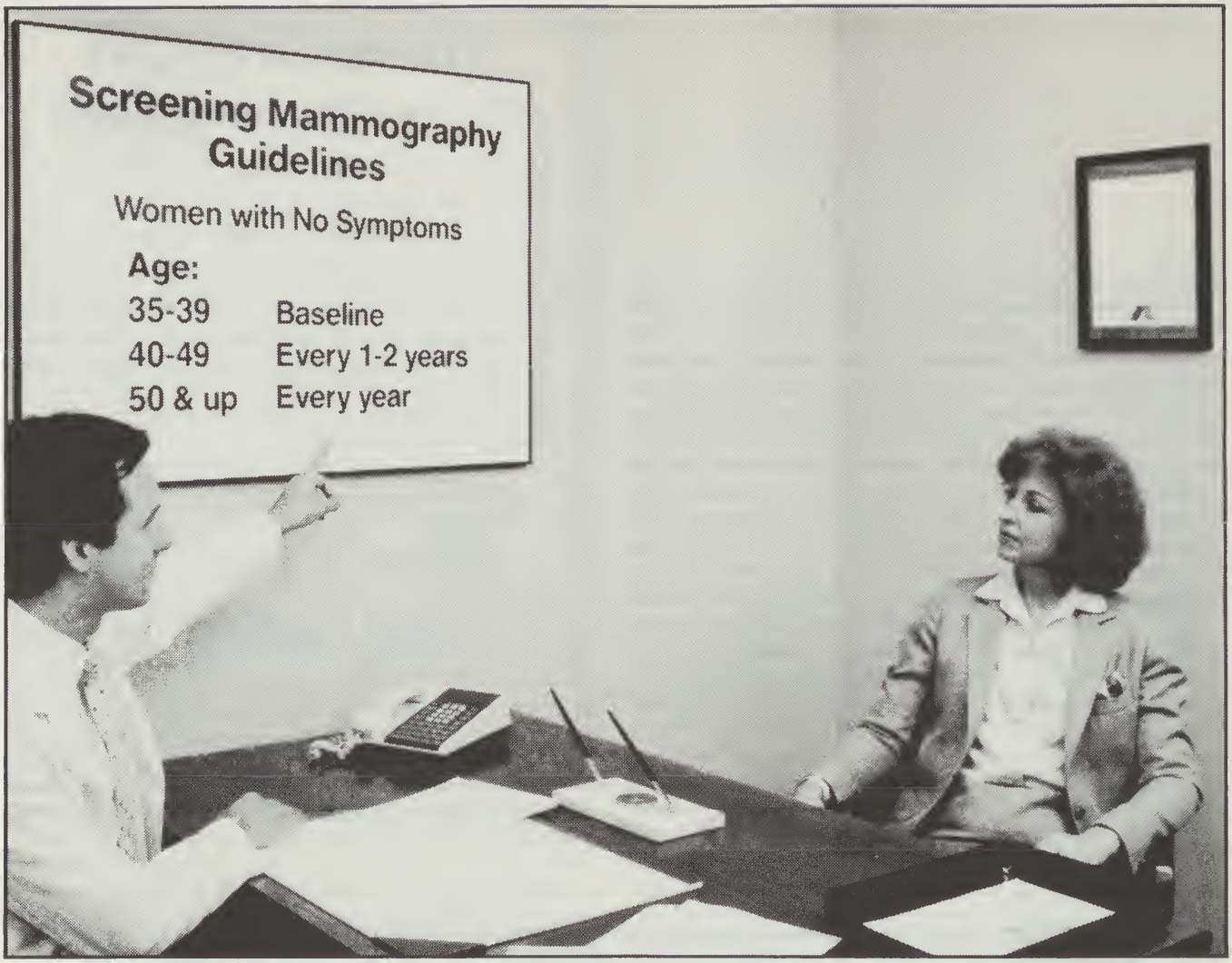
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You must be a member of the Faculty or the Auxiliary of the Medical and Chirurgical Faculty to enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

### Contest Rules

1. Photographs may be submitted in two categories—BLACK and WHITE or COLOR.
2. Limit: three entries per person.
3. Entries must have name, address, and telephone number attached to the BACK of each photograph.
4. PRINTS only, no smaller than 8×10 or larger than 11×14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
5. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on April 13, 1988.
6. Entries MUST be matted or dry mounted. No framed photographs will be accepted.
7. Photographs entered in the contest will be on display at the Annual Meeting of April 1988.
8. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland, , April 27 through April 29, 1988.
9. Photographs will NOT be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual Meeting on Friday, April 29 or at the Faculty Building thereafter.
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**Mar 14–16 Spectrum of Developmental Disabilities X: Issues of Early Intervention.** Fee: $300; 20 AMA Cat I credits; 20 Cat A credits for psychologists; 2.0 CEUs from ASHA and for nurses. Info: C. Kearney 301-955-3168.

**Mar 17–18 Imaging Living Brain Chemistry: Principles and Practice.** Fee $290, residents and Fellows $145; 14 AMA Cat I credits. Info: P. Macedonia 301-955-6085

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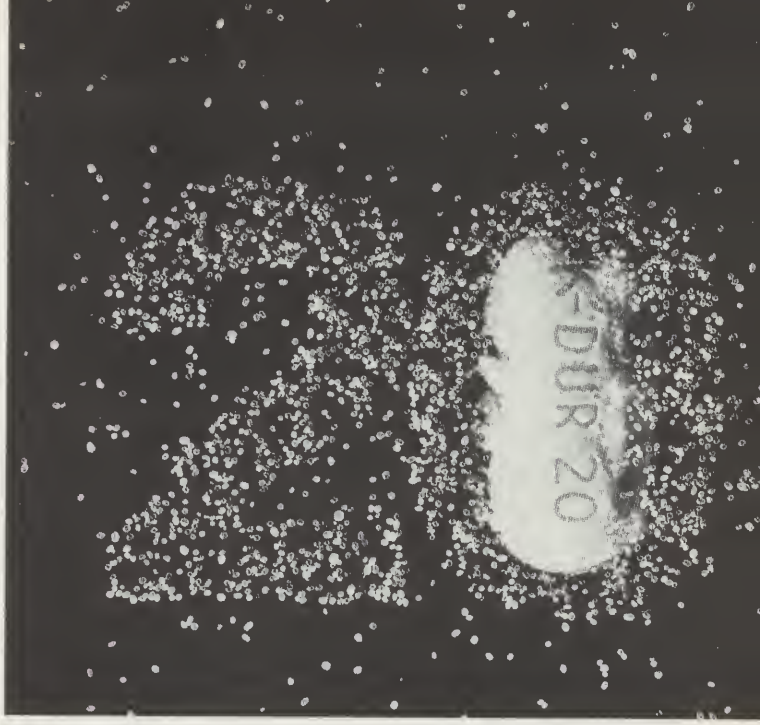
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Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

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**Metabolic Acidosis**—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

**PRECAUTIONS:** The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

**Laboratory Tests:** Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

**Drug Interactions:** Potassium-sparing diuretics; see **WARNINGS.**

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Long-term carcinogenicity studies in animals have not been performed.

**Pregnancy Category C:** Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

**Nursing Mothers:** The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS:** One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINOICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

**OVERDOSAGE:** The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINOICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.

2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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**CME Courses:** For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**Feb 25 Geriatric Care.** Fee: $25; 5.5 AMA credits. Cat I.

**Feb 27, 1988 Neurology and Music at Maryland.** Fee: $150: 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Green St., Baltimore, MD 21201 (301-328-6484).

**Mar 9 Selected Topics in Internal Medicine.** Seventh in series of University of Maryland School of Medicine Dean's Conferences. Fee: $25; 5+ AMA Cat I credits.

**Mar 24–25 Fourth National Traumatic Brain Injury Symposium "The Neglected Disease,"** sponsored by the Speech-Communication Disorders Program, MIEMSS, Shock Trauma Center, Baltimore. Info: R. Schwartz 301-328-6101.

**Mar 25–26 Symposium on Urologic Cancer,** Omni International Hotel, Baltimore. Fee: $175; 10+ AMA Cat I credits.

**Apr 14–15 Second Annual Department of Family Medicine Weight Disorders Symposium**—International Hotel at BWI Airport. Fee: $100; 9+ AMA

Cat I credits. (Please note date and fee changes from the January *MMJ* listing.)

**Apr 21 Eighth in series of University of Maryland Dean's Conferences.** Fee: $25; 5+ AMA Cat I credits.

**Visiting Professor Program**—Director of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

**Visiting Practitioner Preceptorships**—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. AMA Cat I credits available.

**Departmental Rounds and Conferences—September through June**—Hands-on opportunities for practicing physicians including weekly lectures and discussions by sponsoring departments/divisions. Hour-for-hour AMA Cat I credits. Brochure available.

**Advanced Trauma Life Support Provider/Instructor Programs,** sponsored by University of Maryland/MIEMSS. Fee: $350–500; 16–22 CME Cat I credits. Info: Melody Nelson 301-328-2919.

**Mar 16–18—Provider**
**Apr 14, 15—Provider**
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**Sep 14–16—Instructor**
**Oct 13, 14–Provider**
**Nov 17, 18—Provider**
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### Miscellaneous Meetings

**Feb 26–28 Health Promotion, Disease Prevention—The Expanding Pediatric Role,** Omni Hotel, Richmond, VA. Virginia Chap., American Academy of Pediatrics and the Virginia Pediatric Society, 1001 E. Main St., Ste 301, Richmond, VA 23219 (804-643-8130).

**Mar 28–30 NIH Consensus Development Conference: Kidney Stones—Prevention and Treatment,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a.m. and 5 p.m.).

**Apr 14–16 Common Hand Problems and Acute Injuries of the Hand and Upper Extremity–Chronic Wrist Pain,** Park Hyatt Hotel, Washington, DC, sponsored by the National Hand Research and Rehabilitation Fund, Inc. Fee: $300, 19 Cat I credits. Info: M. Sorenson, The Hand Surgery & Rehabilitation Center, 622 Massachusetts Ave., NE, Washington, DC 20002 (202-829-1000).

**Apr 20–24 Second Annual Review and Update in Critical Care Medicine,** cosponsored by the Center for Bio-Medical Communication and George Washington University School of Medicine, to take place in the Washington, DC area. Fee: $595 before Feb 1; $675 thereafter. Info: Svetlana Lisanti 201-385-1808.

**Apr 22–24. Twenty-third Annual Pediatric Springfest: Adolescent Medicine, Infectious Disease, and Office Pediatrics.** 11.5 AMA Cat I credits, 11.5 AAP PREP credits, and 1.2 CEU credits by Virginia Commonwealth University. Info: Ann Potter 804-786-0494.

**May 2–4 NIH Consensus Development Conference: Cochlear Implants,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a.m. and 5 p.m.).

**May 4–6 1988 Region II & III High Blood Pressure Control Conference,** Omni Hotel in Richmond, VA. Info: P. Ciavarella or J. Richardson, conference co-chairpersons, Virginia Dept. of Health 804-786-4065.

**May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session,** Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

**Shady Grove Adventist Hospital,** 9901 Medical Center Drive, Rockville, MD 20850. Grand Rounds:

**Feb 25 Heart Transplantation**

**Mar 24 Clinical Approach in Evaluating Male Reproductive Disorders**

**Future Med-Chi Meetings**

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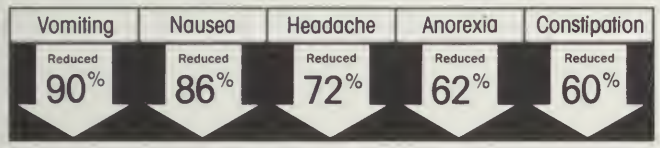
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**References: 1.** Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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**Indications:** Relief of moderate to severe depression associated with moderate to severe anxiety.

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

**Warnings:** Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

**Precautions:** Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

**Adverse Reactions:** Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

*Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

*Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

*Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

*Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

*Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

*Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

*Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

*Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

*Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Overdosage:** Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**Dosage:** Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

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Guest Speaker and Complimentary Continental Breakfast
190th Med-Chi Annual Meeting
Thursday, April 28, 1988
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Patients are wondering what happened to the "good old doctor," doctors are wondering what happened to the "good old patient." Many patients now seem to be consumers, demanding not only individualized and humane care, but low cost, convenience, and perfect results. Physicians find themselves caught up in a storm of expectations which they must single-handedly navigate in order to achieve and maintain quality patient care.

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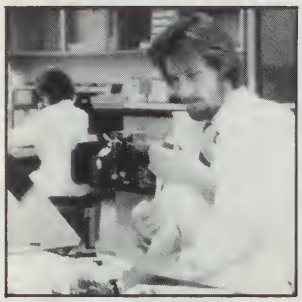
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March 1988

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## Preparing to Travel

*Doctor, My husband has a new job in which he will do some traveling, and I would like to go with him occasionally. How do I manage my diabetes when traveling?*

Be prepared for traveling in case the opportunity presents itself:

1. **Prepare a Diabetes Travel Kit** This should be individualized for each person but usually contains at least the following:
   a. **Insulin** Intermediate acting (Lente or NPH) normally used. Figure the total units per day × the number of days you will be away divided by 1,000 = the number of bottles you will need. Always estimate more than you will need in case of insulin loss or bottle breakage.
   **Regular insulin** If regular insulin is part of your daily therapy, figure it as for the intermediate acting insulin above. If regular insulin is not in your daily program you should take at least one bottle with you in case of short-term need.
   b. **Syringes** One syringe for each dose taken per day of travel. If you are in the habit of using a disposable syringe for a multiple number of injections, then adjust accordingly but err on the side of taking too many rather than too few.
   c. **Alcohol swabs** Foil wrapped swabs are available in packages of 100. Take more than estimated need. Remember that soap and water will work well for cleaning the skin for an injection if necessary.
   d. **Testing equipment** Blood glucose monitor. Glucose test strips. Take more than you expect to use. Urine ketone test strips.
   e. **Monitoring diary** When traveling, it is well to note activity and food intake as well as blood glucose test results including the time of each recording. Should problems develop a review of the events will be very helpful.
   f. **Medications** Any remedies you might be taking in addition to insulin. If you have a tendency to motion sickness, discuss bonine, dramamine, and possibly scopolamine transdermal with your physician. Consider some antidiarrheal medication.
   g. **Quick way to get extra glucose** One-ounce package of raisins (travels well and takes up little space) = one fruit exchange. Instant glucose or glucose tablets are a less palatable alternative. Glucagon - one unit should be carried for emergency injection.
   h. **Diabetes identification card and bracelet or other identification** More than one form of identification should be carried in case one gets lost through loss of a purse or wallet.
   i. **Letter from physician** stating that you have diabetes and need to have medication and syringes in your possession at all times.

2. **Plan ahead** Arrange for clothing appropriate for the area to be visited. If you do not have comfortable well-fitted shoes, purchase new ones and have them well broken in before departure. Make sure there are suitable food stops at appropriate times along the itinerary. If not, arrange a picnic to cover the proper intervals. Try to arrange daytime travel when ever possible.

3. **Insulin adjustments** Traveling north and south usually presents no problem because there are no time zone adjustments. Flying east shortens the day and the total insulin needed for the shortened day is in proportion to the portion of the day lost. In going to Europe approximately six hours or 1/4th of a day is lost. One method for adjusting for the day of travel is to reduce the dose for the day by 1/4th. If 40 U of NPH were taken normally it should be reduced to 30 U. In flying west, the day is lengthened, and more insulin would be taken by a similar plan. This should be discussed with your physician for each trip. For bus, train, or ship travel, time zone changes are usually not more than one hour per day and present no problem.

*DeWITT D. DeLAWTER* MD
**Editor**

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# The Personality Disorder Treatment Program of Sheppard Pratt Hospital.

You know—perhaps firsthand—how treating a borderline patient can become a vicious circle. The harder you try to help, the more resistant or even abusive your patient becomes, until both of you are left frustrated and exhausted.

But how do you break the therapeutic deadlock? Changing therapists may only begin the cycle all over again. And a brief hospital stay usually produces only temporary improvement.

At Sheppard Pratt, our experience has shown that specialized inpatient treatment, coupled with the opportunity for a longer hospital stay, may be the only effective way to interrupt this pattern of behavior and uncover and resolve the deep-seated problems underlying the patient's longstanding difficulties.

The Personality Disorder Treatment Program at Sheppard Pratt is designed to provide such long-term care. Our objective is to bring about lasting improvement in patients with personality disorders.

The process is not easy. Serious personality disorders do not lend themselves to a "quick fix." But we are encouraged by the number of our patients who have, in time, broken out of the vicious circle.

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Admissions Office, (301)339-4070, The Sheppard and Enoch Pratt Hospital, 6501 North Charles Street, P.O. Box 6815, Baltimore, MD 21285-6815.




THE PERSONALITY DISORDER TREATMENT PROGRAM

# Electroconvulsive Therapy I: Indications

*MARK S. KOMRAD* MD

Controversy generates mythology, and facts can be caricatured. One of the most striking examples of this situation is the controversy over electroconvulsive therapy (ECT). For many years, a common and accepted clinical procedure, it is now debated with such heat by both proponents and detractors that a balanced understanding of its risks and benefits can elude not only the lay public but also many physicians. This is ironic for a procedure that once was considered safe enough to be administered in the outpatient offices of some psychiatrists in Maryland. Recently a law banning ECT was passed in Berkley, CA, and a similar law is working its way through the Vermont Legislature. Like recent controversies over Supreme Court nominations, the public treatment of ECT reflects the power of the press and of politically forceful individuals to capitalize on uncertainty.

The assumption that seizures may have a therapeutic value in psychiatric disorders arose from a mistaken assumption. Psychiatrists initially speculated that epilepsy might somehow offer protection against the development of schizophrenia since they thought epilepsy was rare among patients in psychiatric asylums. Systematic study later showed that epilepsy was in fact far from rare among the mentally ill, but it was one of those historically important mistakes that opened an entire field of clinical investigation by setting up an idea that seizures may have therapeutic value for some mental illnesses.

Clinicians like Meduna first tried inducing convulsions with pharmacologic agents such as camphor and pentylenetetrazol. Difficulty controlling convulsions with these parenteral agents encouraged Bini and Cerletti to use an electrical stimulus. Many patients responded with a resolution of hallucinations and delusions and an improvement in vegetative functions such as sleep, appetite, energy, and mobility. For some catatonic patients, it was virtually miraculous, melting away their odd posturing and staring. Closer examination, however, revealed that patients with major depression and manic-depressive illness derived more striking benefits than did those with schizophrenia.

Although the popular press may portray the clinical efficacy of ECT to be universally doubtful, a number of controlled studies have repeatedly confirmed the value of ECT for treating severe depression. Much of the research comes from Great Britain where controversies over ECT have been less vociferous. Four important studies between 1977 and 1981 established that ECT was superior to a sham procedure in which a patient was anesthetized in the usual way, and either no current delivered through the electrodes or a stimulus was given below the seizure threshold. Patients who had complete seizures recovered more rapidly and markedly than those who did not. This established the seizure as a clinically effective phenomenon.

A variety of studies have found ECT to be at least as effective as antidepressant medication. The salutary effects of ECT are achieved much more quickly than with medication. In fact, many who do not respond to solid therapeutic trials of antidepressants do respond to ECT. In one situation, ECT is clearly superior to medication therapy and psychotherapy: in cases of major depression complicated by psychotic delusions or hallucinations.

What is less clear is the duration of therapeutic benefit after ECT treatments are stopped. Many studies have shown these effects are not persistent, and patients can relapse within one to six months if they have no additional treatment. Therefore, the standard practice is to follow-up ECT by putting patients on antidepressants or lithium, taking advantage of the known prophylactic effect of these drugs to reduce the risk of relapse after initial rapid recovery using ECT.

ECT is most effective in the treatment of affective disorders including unipolar and bipolar depression, as well as bipolar mania. The treatment of schizophrenia with ECT has been studied carefully. It is often efficacious in the short run, but symptoms rapidly relapse after treatment is stopped. For certain schizophrenic patients who do not respond to neuroleptic medications, ECT can be helpful. Such outpatients can receive monthly maintenance treatments for extended periods.

Some have argued that ECT is a first choice for the treatment of delusional depression because of its high efficacy in these very serious cases. The 1985 NIH Consensus Conference on ECT strongly supported the use of ECT for delusional depression but made no commitment as to when ECT might be the treatment of first choice. Generally, in cases when a depression is life threatening because of severe suicidal ideas or extensive inanition, the rapidity of recovery with ECT compared with medication leads many psychiatrists to choose ECT first.

*Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.*

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# MR UPDATE

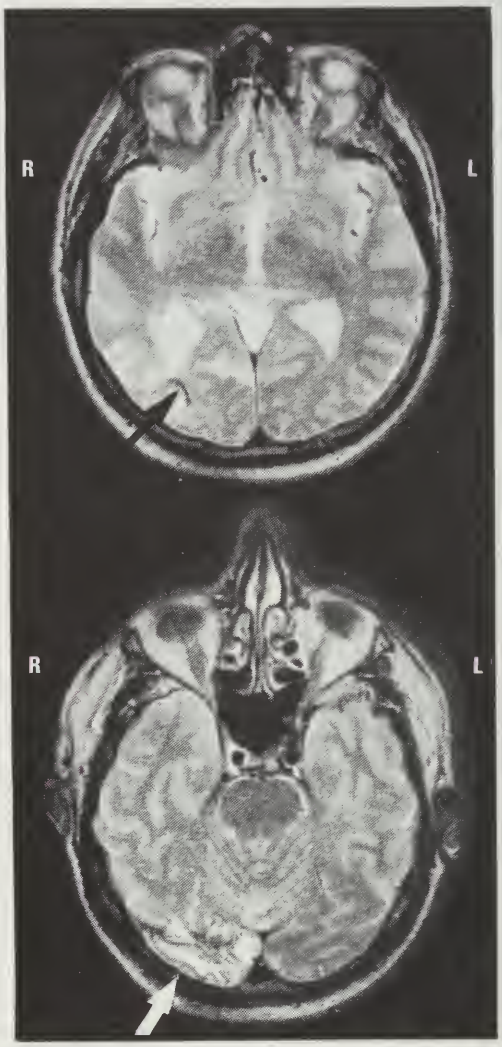
## MRI Advances the Detection of AVM's

### BRAIN EXAMINATION

**HISTORY:** A 52 year old man had two small right occipital hemorrhages, 18 months apart. After resolution, negative studies included two cerebral arteriograms and contrast CT scans.

**SCAN:** Several dark curvilinear structures, evidence of the flow void phenomenon, indicate abnormal vasculature in the right occipital lobe. Associated high signal intensity of adjacent white matter is compatible with edema, hemorrhage, or gliosis. Together these findings are consistent with occult arteriovenous malformation (AVM).

**MRI HIGHLIGHTS:** MRI is highly sensitive for AVM's which are otherwise occult by arteriography or CT scanning. These may be found in patients with spontaneous hemorrhage, seizure disorder, or other clinical presentations. In addition, the sensitivity of MRI for intracranial hemorrhage is being increased through the use of new partial flip imaging techniques. Refinements in signal processing, surface coils, and other techniques continue to expand the clinical indications of MRI. Because of its sensitivity, safety, and patient comfort, MRI is the screening technique of choice for most CNS abnormalities.




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# EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER

COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

MARCH 1988

## INCREASE IN PRIMARY AND SECONDARY SYPHILIS

During the calendar year ending December 31, 1987, the State of Maryland received 597 reports of primary and secondary (P&S) syphilis. This figure includes Baltimore City and represents a 32% rise over calendar year 1986. The cases are being reported in young women and young heterosexual men. Review of the P&S syphilis case reports for 1988 indicate this trend is continuing. Increases in syphilis among women of childbearing age are accompanied by increased reports of congenital syphilis. There were two cases of congenital syphilis reported last year.

In addition, lesion diseases, such as syphilis, have been implicated as facilitating transmission of human immmunodeficiency virus (HIV) infection.[1,2] The population experiencing the largest growth in reported P&S syphilis (young heterosexual men and women living in urban areas) is therefore at greater risk for infection with HIV.

Public health officials are intensifying efforts to control the increasing rates of P&S syphilis. Disease intervention activities to locate, examine and treat sexual contacts to persons with infectious syphilis are ongoing and plans to augment those activities are being implemented. Educational outreach continues to be emphasized.

Private practitioners need to have a high index of suspicion. P&S syphilis should always be part of the differential diagnosis when a young, sexually active person presents with an ulcerative lesion at a site of sexual exposure or with an unusual rash.

P&S syphilis should be ruled out by darkfield microscopy and serological tests for syphilis (STS). In primary syphilis, the STS may be nonreactive in the presence of disease. Darkfield microscopy is available at most local health departments throughout Maryland.

Patients diagnosed with P&S syphilis should be treated as follows:

Benzathine penicillin G 2.4 million units IM at a single session

Penicillin allergic adults who are not pregnant may be treated with tetracycline HCl 500 mg by mouth 4 times a day for 15 days

Penicillin allergic pregnant women with syphilis should have their allergy confirmed and be managed in consultation with an expert.

Follow-up STS are recommended at 3, 6, 9, and 12 months after treatment for P&S syphilis. The titer on a VDRL or RPR test is expected to decrease at least fourfold (for example, from 1:32 to 1:8) and may often revert to being nonreactive within a year of treatment.

Anyone who has had sex with a person who has primary syphilis in the ninety (90) days prior to diagnosis or in the one hundred eighty (180) days prior to the diagnosis of secondary syphilis, should be treated with one of the above regimens regardless of the results of the STS.

Local health departments can be contacted to offer assistance in patient follow-up and sex partner notification.

REFERENCES:

1 Greenblatt, Ruth, SL Lukehart, et al, **Genital Ulceration as a Risk Factor for Human Immunodeficiency Virus Infection in Kenya**, THP. 68, Abstract, III International Conference on AIDS, JUNE 1987.

2 Potterat, John J, **Does Syphilis Facilitate Sexual Acquisition of HIV?**, Letter, Journal of the American Medical Association, Vol. 25, No.4, July 24, 1987.

## PENICILLINASE-PRODUCING NEISSERIA GONORRHOEAE (PPNG) ALERT

Private practitioners are being alerted to the continuing outbreak of PPNG occurring in Anne Arundel, Montgomery and Prince George's Counties. The Maryland State Department of Health and Mental Hygiene recommends that patients infected with gonorrhea who live in these areas or who report having sex with someone living in these areas or Washington, D.C., be treated with ceftriaxone 250 mg IM **OR** spectinomycin 2.0 g IM. Please note that ceftriaxone is also effective for pharyngeal gonococcal infection due to PPNG. This IM single dose regimen should be followed by a seven day course of oral tetracycline 500 mg four times daily **OR** doxycline 100 mg twice daily. For patients in whom tetracyclines are contraindicated or not tolerated, the single dose regimen may be followed by erythromycin base or stearate 500 mg by mouth four times daily for seven days **OR** erythromycin ethylsuccinate 800 mg by mouth four times daily for seven days. Since tetracycline resistant gonorrhea is also being reported in these counties as well as across the state, tetracycline alone is **not** recommended as an alternative treatment for PPNG or uncomplicated gonorrhea.

## HUMAN RABIES DESPITE TREATMENT WITH RABIES IMMMUNE GLOBULIN AND HUMAN DIPLOID CELL RABIES VACCINE--THAILAND

On March 6, 1987, a rabid dog severely bit a ten-year-old Thai boy on the left calf and forehead and on the right eyelid through to the bulbar conjunctiva. The wounds were immediately flushed with saline alone and sutured at a local hospital. Tetanus toxoid and suckling mouse rabies vaccine were given intramuscularly (IM). The following day, 21 hours after exposure, the patient received 1 mL human diploid cell rabies vaccine (HDCV) IM in the gluteal area and 20 IU/kg of human rabies immune globulin (HRIG) IM in the opposite gluteal area. Subsequent 1 mL injections of HDCV were given IM in the gluteal area on days 2, 6 and 13. Twenty-one days after exposure, the patient developed fever, headache, lethargy, vomiting,

and progressive paralysis of all extremities. The patient died 15 days later, 36 days after exposure. His brain tissue was positive for rabies virus by direct fluorescent antibody.

**Reported by:** P Lumbiganon, MD, V Bunyahotra, MD, C Pairojkul, MD, Khon Kaen University, Khon Kaen; Thailand Ministry of Public Health, Bangkok, Thailand. Viral and Rickettsial Zoonoses Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

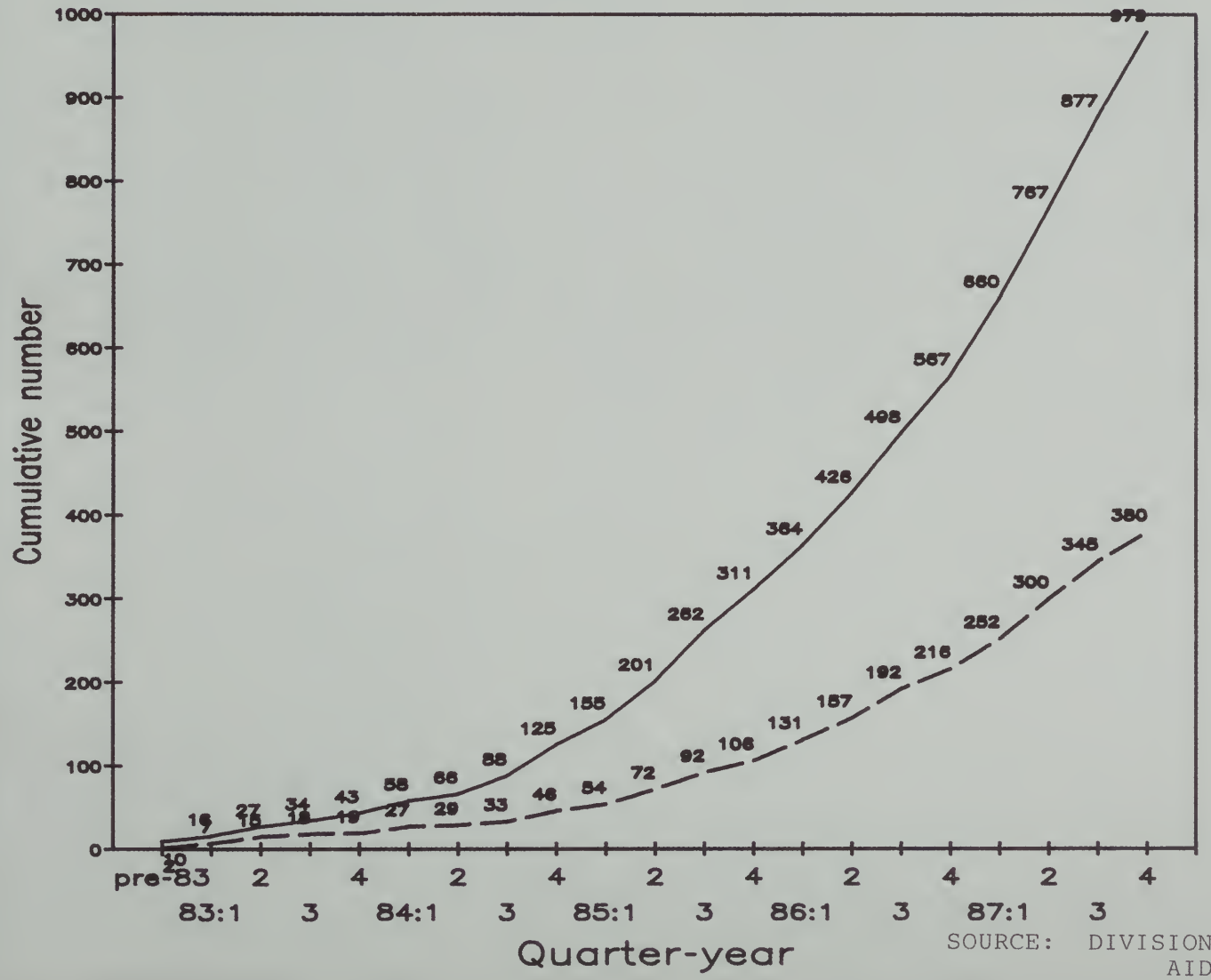
**Editorial Note:** This is the second laboratory-confirmed case of rabies reported to have occurred despite administration of HDCV and HRIG within 24 hours of exposure. The previous case involved a 20-year-old South African male who received HRIG 13 hours after a rabid mongoose bit his finger. One milliliter of HRIG was infiltrated around the wound, and the remainder of the dosage was given IM in the deltoid. All injections of HDCV (days 0, 3, 7, and 14) were given IM in the gluteal area. On day 21, the patient developed paresthesia of the bitten arm. He died of rabies 16 days later.

There are several possible explanations for the observed failure of HDCV and HRIG to protect against rabies in these cases. Although the timing of vaccine administration was similar to the recommended schedule in both cases, vaccine was given in the gluteal area. A reduced antibody response has been shown when hepatitis B vaccine is administered in the gluteal area instead of the deltoid. Presumably, subcutaneous fat in the gluteal area may interfere with the immunogenicity of HDCV. Moreover, only saline solution was used to flush the Thai patient's wounds. Cleaning bite wounds with saline alone has been shown to be less effective in decreasing the risk of rabies than cleaning with anti-viral solutions, such as soap and water. Finally, persons with severe bites to the head and digits, sites of rich innervation, are more likely to develop rabies than persons bitten elsewhere. Inoculation of rabies virus near or into the peripheral nerves might bypass the protection conferred by rabies immune globulin and vaccine, both of which are ineffective after the virus invades the nervous system. Evidence did not indicate immune deficiency in these patients or decreased immunogenicity of the vaccine lots. Also, HDCV has been shown to be stable even when exposed to high ambient temperatures for up to 11 weeks.

Approximately 18,000 persons received rabies postexposure prophylaxis in the United States per year (CDC, unpublished data). Severe attacks by rabid wild animals and dogs like that suffered by the Thai patient are rare in developed countries. No treatment failures have been reported when the recommended postexposure prophylaxis regimen of wound cleaning, HRIG, and 5 doses of HDCV have been strictly observed. Although the reasons these two patients develped rabies are unknown, proper wound management and proper administration of HRIG and HDCV might have prevented disease. Wounds inflicted by animals suspected or confirmed to be rabid should be immediately and thoroughly cleaned with soap and water. If anatomically possible, up to half of the HRIG dose should be infiltrated around the wound and the rest given IM in the gluteal area or lateral thigh. For postexposure prophylaxis, adults and children should always receive HDCV IM in the deltoid. Infants can be given the vaccine in the anterolateral upper thigh.

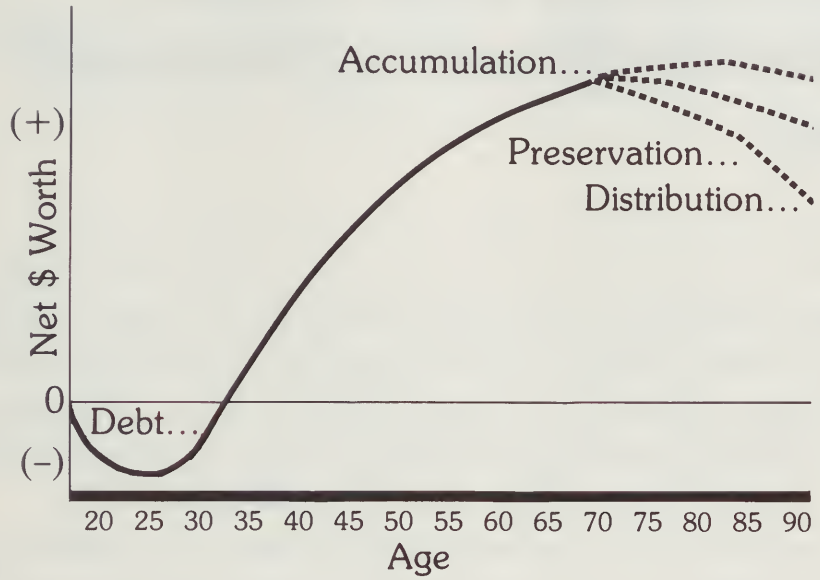
**References** are available upon request.
**SOURCE:** CDC, MMWR, November 27, 1987/Vol. 36/No. 46.

# CUMULATIVE NUMBER OF AIDS CASES 1981-1987
# IN MARYLAND STATE AND BALTIMORE CITY
## BY QUARTER-YEAR OF DIAGNOSIS




SOURCE: DIVISION OF AIDS SURVEILLANCE
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*Meridian wants you to know*

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301-296-1000

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Baltimore, Maryland 21204

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Address _____

Telephone _____

Organization _____

For hospitals and PA's with need for more than one information kit, please indicate the number of additional kits needed _____.

# Executive Director's Newsletter

March 1988

**SURVEY OF PHYSICIANS ON PRO ACTIONS**

We have printed a survey on PRO actions following the Quality Practice Digest. This survey was designed to help measure physicians' problems resulting from regulations established by HCFA and carried out by the Delmarva Foundation for Medical Care.

Your completion and prompt return of the questionnaire to Med-Chi will help us quantify the extent of the problem.

**LEGISLATIVE UPDATE**

The battle continues against Mandated Medicare Assignment. Delegate Paul Pinsky again has introduced legislation patterned after the law in Massachusetts and has been successful in getting other co-sponsors for HB688. Busloads of senior citizens have been to Annapolis each week to lobby in favor of the legislation. The vote in the House Environmental Matters Committee promises to be very close.

Hearings have been held on the Loss Reserves Bill HB541 and on the Mutual Waiver Bill HB944. The passage of these two pieces of legislation guarantees a 15% reduction in whatever increase Med-Mutual contemplates in the forthcoming rate filing. The Faculty is hard at work lobbying for the passage of these bills.

Legislators in both the House and Senate have introduced legislation that would require all physicians to pay the same malpractice insurance premiums. The Faculty has testified strongly against this measure as this proposal is patently unfair and impossible to administer.

**MEDICARE**

Medicare carriers will be mailing the annual HCFA "Dear Doctor" letter detailing the latest Medicare reimbursement changes and emphasizing the incentives provided for "participating" physicians.

Physicians will have until midnight, Thursday, March 31, 1988 to alter their current participating or non-participating status. This decision-making opportunity also will determine Medicare's allowable prevailing charge levels for the period beginning April 1, 1988 and ending December 31, 1988. The payment differential favoring participating physicians will be widened from the present 4% to 4.5%. The Faculty recommends that physicians who decide to change their present non-participating or participating status should advise carriers by registered mail, requesting return receipt and assuring proper documentation.

**DUES PAYMENT**

All Med-Chi members are reminded to pay their 1988 dues before March 31, 1988 so that membership benefits may continue without interruption. Article III, Section 5 of the Faculty Bylaws states: "Any member whose dues are unpaid by April 1 each year shall be deemed to be not in good standing and shall forfeit all rights in the Faculty and its components, and shall not be reinstated until after the Annual Meeting and all arrearages are paid."

**MMPAC CABARET**

The date for the MMPAC Cabaret was printed incorrectly in the Annual Meeting Advance Program. Please note that the CORRECT date for this event is WEDNESDAY, APRIL 27, 1988 from 5:30 p.m. to 10:30 p.m. at the Hyatt Regency Inner Harbor Hotel.

**PRESIDENTIAL BANQUET**

The Presidential Banquet will be held on THURSDAY, April 28, 1988 at the Hyatt Regency Hotel in Baltimore.

**AUXILIARY TOUR**

The Faculty is sponsoring a tour of Baltimore City for Auxiliary members on FRIDAY, APRIL 29, 1988 from 9 a.m. until 12 noon. The tour will leave from the Harbor Court Hotel in Baltimore, and will cost $20 per person. The fee will include a fully narrated tour by a personable, well-informed guide; comfortable transportation; and all admission costs. The tour will include visits to Little Italy, Fells Point, Mount Vernon, Sherwood Gardens, the Maryland Historical Society, and Mount Clare, the city's only pre-revolutionary mansion.

Call the Convention Department at 539-0872 or 1-800-492-1056 (toll free in Maryland) to make your reservations. Act promptly; seating is limited.

**PHYSICIAN LEGISLATOR EXHIBIT**

"Is there a doctor in the house?" is the theme of a new exhibit honoring physicians who have served in the Maryland State Legislature. The exhibit, prepared by Faculty staff, will feature names of over 100 physician senators and delegates who served between 1634 and 1988. The display also will include copies of portraits, photographs, and bibliographies of several of the physician legislators.

The new exhibit will be mounted on the "Freedom Wall" in the Maryland Statehouse in Annapolis and will be on display for two weeks in March and through the month of April. It also will be exhibited at the Faculty's Annual Meeting.

Angelo J. Troisi, FACHE
Executive Director

**MED-CHI TOLL FREE WATTS LINE**
**1-800-492-1056**

# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly Digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

* * * *

**NARCOTIC ADDICTION:** A physician's license is subject to revocation or suspension if the physician is addicted to or habitually uses any narcotic or controlled dangerous substance (HO 14-504 (9)) (See Physician Discipline).

If an individual seeks counseling, treatment, or therapy for any form of drug abuse from a physician, psychologist, or hospital or from a person who is certified by the Drug Abuse Administration for counseling or treating drug abuse, the oral or written statements that the individual makes and the observations and conclusions that the physician, psychologist, hospital, or other person derives are not admissible against the individual in any proceeding. (HG 9-802).

**LABORATORY EXAMINATION RESULTS:** On written request of an individual to a medical laboratory for a copy of the results of a laboratory examination of that individual, the medical laboratory shall send a copy of those results that are sought to that individual. If the results of a laboratory examination are contained in or will be filed in a medical record, the request for a copy of the results shall be made to the facility holding the record. In all other cases, the medical laboratory may require the individual requesting a copy of the results to pay the prevailing cost of copying and transmitting the copy. The medical laboratory shall notify the individual's physician before sending the results to the individual (HG 17-202.1).

**LABORATORIES, MEDICAL:** The law is summarized in part. The full law is found in Health General Article, 17-201-216, and any relevant COMAR regulations. A medical laboratory is any laboratory that makes examinations in connection with the diagnosis and control of human diseases. Medical laboratories must be inspected and must comply with the rules and regulations of the Secretary of Health and Mental Hygiene, receive a permit to operate, and be inspected periodically. The director of the medical laboratory need not be a physician. Exception: A physician or group of not more than three physicians, if the physician or group is performing medical laboratory procedures for a patient of the physician or group, need not apply for a permit. However, to qualify for the exception, the physician exempted from the permit requirements shall demonstrate satisfactory performance in a proficiency testing program in applicable laboratory procedures before the physician performs any medical laboratory procedure. A person may not directly or indirectly advertise for or solicit business in this state for any medical laboratory, regardless of location, from anyone except a physician, hospital, medical laboratory, clinic, clinical installation, or other medical care facility (HG 17-201, 203, 205, 212, 215) (See Tissue Banks).

**PRIVILEGED COMMUNICATION:** Narcotics. Information communicated to a physician in an effort to procure unlawfully a narcotic drug, or to procure unlawfully the administration of any such drug, shall not be deemed a privileged communication (Article 27:287).

Patient/Psychiatrist or Psychologist. In all judicial, legislative or administrative proceedings, a patient or his/her authorized representative has a privilege to refuse to disclose and to prevent a witness from disclosing communications relating to diagnosis or treatment or the patient's mental or emotional disorder. There is no privilege if (a) disclosure is necessary for the purposes of placing a patient in a facility for mental illness; (b) the patient makes communications in the course of an examination ordered by the court and the issue at trial involves his or her mental or emotional disorder; (c) in a civil or criminal proceeding, the patient introduces his mental condition as an element of his claim or defense; (d) the patient makes a claim against the psychiatrist or licensed psychologist for malpractice; (e) related to civil or criminal proceedings under defective delinquency proceedings; (f) the patient expressly consents to waive privilege (Courts & Judicial Proceedings 9-109).

# SURVEY OF PHYSICIANS ON PRO ACTIONS

Med-Chi has been receiving complaints from physicians regarding federal regulations promulgated by HCFA and carried out by its designated PRO agent in Maryland, the Delmarva Foundation for Medical Care.

By completing the following questionnaire and returning it to Med-Chi, you will help us quantify the extent of the problem.

1. What is your type of practice or specialty?

   _____

2. Do you hospitalize Medicare patients? Yes_____ No_____

   If you answered no, do not proceed. Return this form to Med-Chi.

   If you answered yes, please continue.

* * * * * * * * * * * * * * * * * * * *

3. In the past twelve months have you received letters from Delmarva concerning:

   (please check all categories that apply)

| | About how many? |
|---|---|
| a. Retrospective denial | _____ |
| b. Continued stay denial | _____ |
| c. Admission denial | _____ |
| d. Ancillary services you have ordered | _____ |
| e. Quality of care you have provided | _____ |
| f. Others _____ | _____ |

4. Have you appealed Delmarva's decision?

   Yes _____ No _____

   a. If yes, about how many times? _____

   b. Has Delmarva responded? Yes _____ No _____

   c. How long did it take to get a response? _____

   Comments: _____

   _____

5. Have your patients received letters from Delmarva?

   a. If so, how many? _____

   b. What have been their comments? _____

   _____

6. Have Delmarva's activities affected how you provide and render medical care?

   Yes _____ No _____ If yes, has the change been for the better _____ or for the worse _____?

   Please explain, using specific examples: _____

   _____

   _____

   _____

   _____

   _____

   _____

7. Additional comments: _____

   _____

   _____

   _____

   _____

   _____

   _____

Thank you!

Please return to:

PRO Project
Medical and Chirurgical Faculty
1211 Cathedral Street
Baltimore, Maryland 21201

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| Silver Spring | 587-3136 |
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# Looking after your patient is a big responsibility.

# We accept it.



# Committee on Physician Rehabilitation
# Ten Years of Experience, Strength, and Hope

This issue of the *Maryland Medical Journal* marks the Tenth Anniversary of the formation of the Committee on Physician Rehabilitation. Since its inception, the Committee has served as the primary resource for the Maryland medical community on matters related to physician impairment due to illnesses such as alcoholism, drug dependence, psychiatric problems, or senility. The Committee serves a dual purpose: to safeguard patient care and to help sick physicians recover from their illnesses.

The stories of recovery contained in the first article were written by physicians who have recovered from alcoholism or drug addiction and have returned to their practice as healthy, able physicians. These few cases are a representative sample of the over 100 stable recoveries that have occurred because of the Committee's efforts.

For someone to call in a report about a possible problem with a colleague, friend, or family physician, he or she needs to be assured of the competence and benevolence of the Committee. It is encouraging to us that over the last ten years, the number of reports to the Committee has increased to over 70 per year. This indicates an expanding sense of awareness and trust among the medical community. As long as the program remains confidential and nondisciplinary, we expect this level of reporting to continue.

Finally, this issue is presented as a memorial to "Marty" Valaske MD, a long-time member of and advocate for this Committee. Through his efforts many physicians found the help they needed to begin on the road to recovery.

**Guest Editors**

**ROBERT K. WHITE MA, Program Director**
**Committee on Physician Rehabilitation**



**EDWARD J. KITLOWSKI MD, Chairman**
**Committee on Physician Rehabilitation**



**Committee on Physician Rehabilitation**

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***H. PATRICK ADAMS* MD**
***ANDY BAER* MD**
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***CHARLES L. WHITFIELD* MD**



## In Memoriam: Martin John Valaske MD
## November 3, 1928–November 9, 1987

Born in Kenosha, Wisconsin, "Marty" graduated from Marquette University School of Medicine in 1954; he did his internship, entering the US Navy in 1955. He completed a Pathology residency in 1964 and received the Meritorious Service Award in 1974 and again in 1975 from the Navy for his work in this field. Dr. Valaske received the Distinguished Service Award from the College of American Pathologists, where he was an elected member of the Board of Governors and also as Editor of the *Pathologist* magazine for 14 years.

He finished his Naval service as Commanding Officer, Naval Regional Medical Center, Great Lakes, Illinois in 1979. On retirement, he moved back to Maryland and joined the faculty of the George Washington University Hospital as Professor of both Health Sciences and Pathology. Later he was certified as an expert by the American Medical Society on Alcoholism and Other Drug Dependencies.

Dr. Valaske began his career in addictive illness with his own recovery at the Naval Hospital in Great Lakes. He organized the Alcoholism Teaching Program at George Washington University Hospital where his symposium became mandatory for the medical students. He was the warm teacher, lecturer, and family counselor at the Seneca Treatment Center. Dr. Valaske wrote; taught; advised; energized; and founded programs, committees, university programs, medical society programs; and most importantly, treated alcoholics and their families with dignity, love, and compassion. He served as an active consultant to the Physicians Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland from 1980 until 1987. Further, he was a member of the District of Columbia Medical Society Impaired Physician's Program and their Chairman from 1983 until 1986. He gave and gave and gave.

His wife JoAnn and his children, Joseph, Nancy, and Martin Joseph, shared in the miracle of his recovery as did the hundreds of us who knew and loved him and for whom he often led the way. JoAnn shares his personal note:

*When an alcoholic gets well—he begins to grow*
*His interpersonal relationships improve*
*His self-image improves*
*He learns assertiveness instead of aggressiveness*
*His dignity is restored*
*He becomes capable of giving and receiving love*
*He learns courageous honesty*
*He learns to share himself with others*
*He practices selfless charity*
*And he becomes a beautiful person.*

Underneath he had added in pen, "The person he had always wanted to be."

God speed dear friend,

***JOSEPH F. CHAMBERS* MD**

# Resource List for Impaired Professionals

**Clergy**
Alcohol and Substance Abuse Committee
Episcopal Diocese (Ecumenical)
P.O. Box 222
Joppa, MD 21085
301-679-8700
Reverend Michael Rokos, Chairman

**Dentists**
Committee for Rehabilitation of Dentists
Maryland State Dental Association
6470 Dobbin Road
Columbia, MD 21045
301-964-2880
Toll-Free: 1-800-492-3678
Hot Line: 301-964-2275
Philip Nolan DDS, Clinical Coordinator

**Lawyers**
Lawyers Counseling Program
Maryland State Bar Association
Maryland Bar Center, 520 West Fayette Street
Baltimore, MD 21201
301-685-3993 or 685-7878
Toll-Free: 1-800-492-1964
Richard Vincent BA, CAC, Director
(Full-time staff)

**Nurses**
Impaired Nurse Committee
Maryland Nurses Association
5820 Southwestern Boulevard
Baltimore, Maryland 21227
301-242-7300
Marie McCarthy RN, MS, Chairperson

**Physicians**
Committee on Physician Rehabilitation
Medical and Chirurgical Faculty of Maryland
1211 Cathedral Street
Baltimore, MD 21201
301-539-0872
Toll-Free: 1-800-492-1056
Hot Line: 301-727-0120
Robert K. White MA, CAC, Program Director
(Full-time staff)

Committee on Impaired Physicians
Medical Society of the District of Columbia
2007 Eye Street NW
Washington, DC 20006
202-466-1850
Donald Meek MD

**Physician Assistants**
Committee on Impaired Practitioners
Maryland Academy of Physician Assistants
P.O. Box 20277
Baltimore, MD 21284
301-337-5654
George Prudden PA-C, Chairman

**Pharmacists**
Pharmacist Rehabilitation Committee
Maryland Pharmaceutical Association
650 West Lombard Street
Baltimore, MD 21201
301-727-0746
Tony Tommasello PD, President

**Podiatrists**
Impaired Podiatrist Committee
Maryland Podiatry Association
1729 Glastonberry Road
Potomac, MD 20854
301-424-1000
301-764-7044
Brian Kashan DPM, Chairman

**Psychologists**
Committee on Distressed Psychologists
Maryland Psychological Association
1000 Century Plaza; Suite 123
Columbia, MD 21044
301-992-4258
Grady Dale EdD, Chairman

**Social Workers**
Committee on Impaired Social Workers
c/o Family and Children's Services
of Central Maryland
204 West Lanvale Street
Baltimore, MD 21217
301-669-9000
301-269-4075 (urgent, evenings, weekends)
James Clements LCSW, Contact Person

**Veterinarians**
Impaired Veterinary Committee
Maryland Veterinary and Medical Association
10788 Hickory Ridge Road
Columbia, MD 21044
301-730-2122
301-461-2280
David Tayman DVM, Chairman

# Physicians in Recovery

*ROBERT KANE WHITE MA and EDWARD J. KITLOWSKI MD*

**It is difficult to communicate the work of a confidential committee. By presenting several stories of recovery in the physicians' own words, we hope to convey the importance of this work to the medical community and to the membership of Med-Chi. It is vital that we not lose sight of the enormous value a confidential, nondisciplinary program has in attracting and treating physicians suffering from alcoholism and drug addiction.**

From the Committee on Physician Rehabilitation. White is Program Director of the Committee, and Dr. Kitlowski is the Committee's Chairman as well as Medical Director at Hiddenbrook, Inc., Bel Air.

*Thank You for Saving My Life* are very gratifying words to anyone in the helping professions and are especially poignant when they come from a physician and are addressed to a benevolent committee of his/her peers.

The Committee on Physician Rehabilitation has been instrumental in the recovery of over 100 physicians. Primarily, these physicians were alcoholic or drug addicted. "Blinded" by their disease, they could not see they were ill. Chemical dependency is a disease of denial and knows no boundaries in terms of education or medical training.

The following narratives are just a few examples of the recoveries that have occurred because of the efforts of the Committee on Physician Rehabilitation. They are printed anonymously to protect identities.

Each story follows a general pattern of how it was (when they were addicted); what happened (to influence them to seek help); and how it is now (that they are in stable recovery). We encourage the reader to note the following points as each narrative progresses: (a) the physician was sick with a disease that he/she was unaware of; (b) left untreated, the disease might have been fatal; and (c) the Committee on Physician Rehabilitation was responsible for engaging each in effective treatment.

One of the universal themes in any story of recovery is that the disease causes people to act in ways that violate their own conscience. Normally responsible and intelligent people behave in ways that cause them shame and self-loathing. It is especially bewildering to the untrained eye to see a physician behaving in such a self-destructive manner.

A by-product of the process of recovery for physicians is that they become changed forever in their view of the disease. There is a major shift in their perspective. No longer is an alcoholic or drug addict an alien described in textbooks. They become real people, real patients. The recovered physicians' ability to diagnose and effectively treat the disease in their patients becomes enhanced tremendously. These are their stories.

• • •

## Physician Heal Thyself

Although one is naturally hesitant to relive painful life events, I wanted to review briefly my very positive and moving experiences with the Maryland Committee on Physician Rehabilitation. I hope this will contribute in some measure toward appropriate recognition of the Committee's work by the medical community. One major element of the Committee's work is in the field of chemical dependency, and this is how I first came in contact with our colleagues who work with the Committee.

Following extended treatment with meperidine (Demerol), prescribed by a medical specialist for renal calculi, I found myself unable to discontinue taking the analgesic. Initially, this seemed to be nothing more than a minor nuisance, easily remedied when I had the time. I was a responsible individual as well as a hard-working physician with a demanding professional life. Drug dependence might happen to others, but certainly not to me. I am quite certain this is how I felt at the time. The thought there might be a problem was not consciously entertained. Consequently, I did not recognize the early danger signs. As I continued taking the meperidine, the dosage required increased. Misconstruing the maxim of "physician heal thyself," due to lack of knowledge regarding the illness, embarrassment, and fear of prejudice, I embarked on a self-administered detoxification schedule. The results were disastrous. I ended up taking more of the medication than previously.

At this point, my family became aware of the problem. Through professional contacts, they were able to identify available resources of the Maryland Committee on Physician Rehabilitation. Reluctantly (but wisely) I agreed to contact a physician who was a member of the Committee. Soon thereafter, hospitalization for detoxification was arranged under expert professional guidance. I then spent several weeks at an excellent rehabilitation center. Afterward, I fully resumed my professional activities while completing an outpatient treatment program in conjunction with the Committee on Physician Rehabilitation.

It is particularly important to pay special tribute to our colleagues who have served with the Committee on Physician Rehabilitation. They have played a crucial role on the national as well as local level in recognizing the chemical dependencies, including alcoholism, as

legitimate and treatable medical diseases that require the attention of appropriately experienced physicians and health care professionals. They have helped lead the way in promoting the inclusion of chemical dependency disorders in medical school curricula. They have supported vital research efforts into the prevention, diagnosis, treatment, and causes of these disorders, including genetic factors in chemical dependency. Most importantly, the tradition of the Committee on Physician Rehabilitation has emphasized saving lives. I can assure you they have been uniquely successful.

• • •

### Amazingly Similar

Slightly more than five years ago (September 1982) in my early forties, husband and father, I was a respected, successful professional with advanced academic training in several fields. Associated with a major medical institution, I enjoyed unlimited opportunity with generally acknowledged potential for achievement. That was on the outside.

Behind this public facade, several aspects of my private life were awry. I was regularly stealing (the current euphemism is "diverting") from the hospital as much cocaine as I could reasonably get my hands on given the institution's archaic drug-handling system. The actual amount was not large but was supplemented routinely by other pharmaceuticals (stimulants delivered by the mailman), alcohol, and marijuana. Although ingesting, snorting, and inhaling this smorgasbord of mood-altering substances originally was concentrated on weekends and vacations, weekday abuse was becoming more and more common.

True to the state of denial, so typical of the addicted person, I convinced myself that my medical duties were being responsibly acquitted and that my dual existence could be prolonged indefinitely. My second marriage, then five years old, was stormy and close to termination. I had developed a cynical and disaffected attitude concerning academic medicine, and my physical condition was at a lifetime nadir.

None of these qualities of behavior and outlook had developed suddenly. The story of their evolution is unique only in the specific details. I have since heard hundreds of stories (literally) amazingly similar in essence. I would have preferred to be less ordinary. In any event, I have been extremely fortunate, perhaps blessed. Today I am healthy, happy, and free of drugs, including alcohol. I am honest and rule abiding, happily married (same wife) with vigorously renewed relationships, productively employed, and making enthusiastic contributions to my chosen field (same job, same employer). I am deeply and profoundly indebted to many individuals—family, friends, colleagues, therapists, and to the point of this communication, the Committee on Physician Rehabilitation of Maryland. Because they were there and are who they are, I am here. Consider the issues: Why should I be given consideration? Didn't I break all the rules, violate the trust? Would I use again, lie and steal again? Could and should I be trusted to care for patients again? The Committee knows or knows how to obtain the answers to these questions. Richly constituted, largely from a huge and growing throng of recovering individuals, the Committee is both totally tough and thoroughly compassionate. Mindful of responsibility to both the public and the profession, they understand the disease of addiction and its therapy. Most of their "clients" are initially resentful at the intrusion into their private lives, though many, like myself, are secretly relieved to have the charade ended.

The Committee immediately recommended (firmly) an inpatient, 28-day rehabilitation program for me when my activities became known to them through my employer. The end had come after an investigation agonizingly conducted by an individual (aided by my wife, I discovered some months later) who was both my mentor and my friend. The grand finale was a humiliating confrontation by this individual. I was in treatment within days.

Out of the pain, a miracle began. The details of my recovery, closely monitored by the Committee, are as unextraordinary (though still, somehow wonderous) as those of my descent into the abyss of dependency. Essentially they can be heard at any of the hundreds of local weekly meetings of 12-step fellowships whether Alcoholics Anonymous or Narcotics Anonymous (AA/NA).

Today, like other recovering individuals, I experience the ups and downs of daily life, the constant challenge of intimate relationships, and the responsibilities of adulthood as stimuli for spiritual growth. Sometimes it's fun; always it's interesting.

In these days of thrust and parry with legislators and the legal system, the Committee on Physician Rehabilitation stands out as a noble and refreshing professional critic. It is largely composed of anonymous individuals, volunteering their time, sharing their experience, strength, and hope with fellow physicians, the great majority of whom will progress to lead thoroughly respectable, fulfilling lives.

• • •

### High Anxiety

It was in the first year of college that I found the only effective treatment for my constant high degree of anxiety. Alcohol gave me the only peace and sense of

well-being I had ever experienced. Euphoria and exhilaration also were much sought after side effects. Within that first year of my love affair with alcohol, I realized that my drinking habits were different from those of my peers. I drank at **every** opportunity I thought to be socially acceptable, and I drank with an intensity not observable in my friends.

By the time I was in medical school, I had progressed to drinking any night I didn't do academic work. This restriction at least held my consumption down to two or three nights a week. The other nights would be held to a few ounces of alcohol just before retiring for the night. During medical school, internship, and residency, the only restriction able to curb my constant desire for alcohol was the need to excel academically. Despite my addiction, I was able to achieve my academic goal. By the time I finished my residency, there were very few nights not spent drinking. My addiction to alcohol had progressed from almost a fifth a day at the end of my training to almost a half gallon when I began my recovery.

This was in addition to numerous other mood-altering drugs taken daily. Because of my high level of anxiety, I was prescribed Valium during my medical training. I had begun psychotherapy and later psychoanalysis, which went off and on for many years. Early in my career, I developed a bad back that was incapacitating at times. This condition was an excellent reason to continue and to increase the amount of Valium I ingested. It also led to taking Codeine to alleviate the back pain. In no time at all, I was taking both medications with increasing frequency whether or not the back pain was present. Attempting to reduce the possibility of physical addiction, I substituted other mood-altering drugs and narcotics. However, the end result was to become addicted to a multitude of drugs, including alcohol.

The intense craving and self-loathing resulted in chronic depression and suicidal preoccupations. Desolation, hopelessness, and helplessness were a daily torment. I took a last chance and called the Committee on Physician Rehabilitation in Baltimore. My desperation was more than matched by the understanding, compassion, and hope I was given. Because of the Committee members' sensitivity to my condition, I was able to accept their advice and to begin my rehabilitation. Talking with them gave me the courage to seek inpatient medical care and to begin a new life. By adhering to their recommendations, my life has been transformed. Now I am happy and know what freedom from drugs and alcohol really means. I savor the pleasure of my family, of my practice, and of living.

• • •

### Dr. Bob's Story

My name is Bob, and this is the story of 30 years of alcoholism, drug addiction, and finally, recovery. I have two purposes in writing: I hope that by telling the story from my own perspectives you may learn about the insanity and the progress of the disease. This article also is written in gratitude to the members of the Committee on Physician Rehabilitation (especially the former Chairman, Dr. Joseph Chambers), to the other doctors and nurses who had the love and courage to confront my illness through the years, and finally to my long-suffering wife who stayed with me despite her pain. The fact that their efforts were not immediately fruitful make them no less meaningful.

I was accepted back into the school that I had earlier "flunked." I was able to moderate my drinking and achieved honor grades for the next two years. I was then accepted into a prestigious medical school.

With some notable exceptions during times of severe stress, I was able to control my drinking enough to graduate from medical school, and I was accepted into internship and residency at the same medical school. I was then moved on to a community hospital as Chief Resident. Although I was in denial of the real destructiveness of my drinking, I had the good sense to know I would not last long in the high-achieving academic environment.

Shortly after completion of residency, I found it difficult to go an entire day without getting drunk. I began to have "dry heaves" every morning. This, I reasoned, was due to the high anxiety I felt. I felt so bad each morning that retching actually felt good. It was as though I was purging the debauchery of the night before.

To prove to myself and others that I was all right, I encouraged hospital personnel to call me any time of night. If I received a call later than the very early evening hours, I usually was intoxicated. I began to be unable to recall the content of calls received during the night. I tried keeping a notepad by the telephone but either I forgot to write or found an illegible scrawl in the morning. I tried going to the hospital early in the morning to try to reconstruct the events of the night before. I recall the guilt and fear of discovery during these early rounds.

I became more and more isolated. I did most of my drinking at home in my bedroom. I began to have a number of delusions, the theme of which was something like this: "I can quit any time I want to, as long as it's tomorrow"; "nobody knows"; "one won't hurt, and nobody need know"; "anyone under as much stress as I deserves a drink now and then." The biggest delusion was that alcohol was the solution to my problems rather than the cause.

Two things happened at about that time. First, I

discovered that benzodiazepines would help with the shakes and other tranquilizers would insure a night's sleep. I do not know how many I took, but I always had a supply of various tranquilizers with me and soon became heavily addicted. At one point after a detoxification, I stayed off alcohol for 10 1/2 months by taking progressively larger doses of sedatives. My delusion was that this was medicine, and after all, I was a doctor and knew what medicine was best for me. I could not understand why I began feeling progressively worse, often confused and drowsy in the afternoon.

The second thing that happened was the creation of the Committee on Physician Rehabilitation. They took an immediate interest in me, demanded that I have ongoing group therapy, and monitored my progress. Still my defenses were high, and I had another year before I collapsed enough for them to help me into recovery.

Finally I was readmitted to the same treatment center that I had attended four years earlier. I was so sick and so confused that I benefited little from the treatment other than 30 days of abstinence. Near the end of my stay, Dr. Chambers visited and insisted that I go to long-term rehabilitation out of state. By then, I had run out of insurance and was deeply in debt. The Committee loaned me the fee for the extended treatment.

I was both afraid of Dr. Chambers and relieved. I spent the first month or so afraid of losing all things I thought were valuable. Suddenly I realized there was nothing as important as getting over my terrible illness. My counselor told me to close my practice and go to a half-way house after the extended treatment. By then I was ready to do anything to recover.

I look on that first year of my recovery as the most valuable and exciting year of my life. After about 10 months, I was granted a restricted license to practice in another state, and cautiously, under supervision, I reentered the medical profession. After a year and a half out of state, I returned to Maryland and to my family.

I regret the trouble and pain that I caused others during my addiction. I regret a lot of my behavior but am no longer ashamed of it. I know that my behavior was the result of a mind and of values distorted by my disease.

Incredible as it sounds, I am grateful for my disease. I have not had a drink or mood-altering drug in a number of years. I have a growing relationship with my God whom I rejected in childhood. My behavior is now in line with my values. My recovery program is affording me emotional and spiritual growth that would have been impossible otherwise. I am grateful that I still have my wife and that our relationship is growing. My life has taken new direction and meaning. My career is devoted to helping those who still suffer from alcoholism and other addictions. I have gained self-respect for the first time in my life. Moreover, I am gaining the trust and respect of others around me.

The only reservation I have about publishing this story is that it is the horror story of the end stage of chronic alcoholism. I fear that it may be read by someone who needs help but has not yet gotten "that bad" and who will use this as a rationalization to avoid needed help for alcoholism or addiction.

• • •

### Personal and Confidential

My recovery process begins with the involvement of the Committee on Physician Rehabilitation in my life, a life of addiction. I received that letter marked "Personal and Confidential" from the Medical and Chirurgical Faculty of the State of Maryland in the early spring, 1980. After phone contact with the Chairman of the Committee, I met with him and another fellow physician, a process that I came to know of later as an "intervention." This occurred in the office of the Chairman in Kensington. At this time, very gently, some abnormalities of my behavior were brought to my attention and some questions were asked about my drug and alcohol use.

By this time, I had a strong suspicion that I was a compulsive pill user (usually benzodiazepines), probably not addicted to them, and certainly not an alcoholic. Bolstered by a few cocktails I had on the way over and speaking through a mouthful of lifesavers to cover any odor that might be escaping, relaxed by benzodiazepines that I had taken prior to this meeting, I was able to deny any difficulty with drugs or alcohol use, abuse, or dependency.

It was very patiently explained to me that this was a benign or rather a loving process that was being applied to me in the name of the Committee, which was part of the Medical and Chirurgical Faculty of the State of Maryland, the governing body of the physicians of the State of Maryland. It was suggested that I go to an inpatient type of treatment, which I off-handedly rejected since I had other things more important in my life to contend with. (At this time, however, I really cannot think of any that important in the life that was full of desperation and chaos.) I did agree to attend AA meetings, both in Baltimore and in the Washington area, which I did for a period of time. I enjoyed the meetings. I would attend them, go home thinking about all the charming people I had met and the interesting things they had said while I had a couple of "nightcaps" waiting for my usual dose of benzodiazepines to take effect so I could sleep.

In retrospect, I may have been missing some point that was being made. At that time, mine was a life of

deep depression, failure, and especially failure at suicide attempt. One day I decided to do myself in so the insurance on my life could be paid to my family and they could live a better life than they were living at the time. I dressed in my best three-piece suit with clean underwear (as my mother had taught me) to be prepared to be taken to a hospital for that final pronunciation. I had a last drink of scotch and got into my Audi to crash myself into an underpass on the beltway. It was Friday night. I had written a note, placed it on the refrigerator, and gone out in the rain to do the ultimate "Act of Love" for my family. On the way to culminate this act, I ran out of gas.

As I walked home in the rain with a voice ringing in my ears, "You can't even do this right," a dog ran up and bit me. I fell down an embankment rolling in the mud. I went to a liquor store in the area, got a quart of scotch, and woke up on a Saturday morning in the bus station in downtown Baltimore. I was so bedraggled that no one had rolled me, relieving me of the couple of hundred dollars I had in my pocket.

My first thought was, "My God, my family will have missed me, found the suicide note, and be frantic with the police out looking for me." I found a cab with some difficulty, due to the condition I was in, and arrived home to find out my first expectations had not been realized: my family had not found the note, had not even missed me, and worse, did not even question my state of attire and disarray.

By this time, my practice was nonexistent, having been lost by my simply not going to the office or seeing patients for three months. Savings were gone, since my receivables had stopped coming in some time before. The only friends I acknowledged were six Siamese cats and two dogs. I did phone in occasionally to my office to put off the frantic queries of my secretary as to what I was going to do, how I was going to do it, and what we were going to do. I would, however, check the office just before the building closed, usually between 11:30 and midnight, when I was out wandering on the street, going from one drinking establishment to another. But still I did not think I was an alcoholic. I was beginning to believe I really was hooked on pills.

One evening when I went in, there was another letter marked "Personal and Confidential" informing me that the Committee did not think my actions had been appropriate and that I was to make another visit to the chairman of the Committee within a very short time. This I did, and he informed me there were no options open to me now except to go into treatment or to have this Committee make an application for revocation of my license.

As I look back, this was the first time in a long time that I felt any relief. Relief that a decision had been made for me by a group of people I really began to think cared for me and who would help me out of my despair. Yes, this is when my recovery finally began, with the help of friends who really cared about me during the period of detoxification and rehabilitation in a facility. Committee members were there to answer questions, to give encouragement, to share their stories of rehabilitation with me, to give me hope—of which I had very little.

On discharge from the facility, a temporary home was found for me with one of the physician members of the Committee: a gift from this man, his wife, and his family I can never repay, but I always will remember, the ultimate "Gift of Love."

The ensuing years following my recovery have been enhanced by the involvement of this group of recovering, impaired ones. They have advised me, guided me, comforted me, monitored me. The therapeutic contract of monitoring helped stabilize me and get me through those periods of "Christ, I didn't get sober or straight for this." My involvement with the Committee as an active member has meant a number of things to me: providing satisfaction in doing something worthwhile, being part of the advocacy program to support others like myself to establish new friendships, strong and meaningful.

• • •

### The Appropriate Specialist

I am a practicing physician, and I have an incurable disease: addiction. For now, my disease is in remission, and I am practicing my specialty with success. Without help from the Committee on Physician Rehabilitation of our Medical Faculty, neither would be the case.

Addiction is unique among incurable diseases. It affects both body and mind, yet it can be kept permanently in remission. As with any disease, remission requires treatment. Treatment cannot be given until the patient realizes he/she is ill and seeks help from the appropriate specialist. The patient must then work with the treatment program established by his/her doctor.

As physicians we know there are no guarantees as to a successful outcome. Still, we treat each patient's illness with the goal of cure or remission. In my case, the appropriate specialist is the Committee on Physician Rehabilitation. By following the treatment plan established for me, I am staying well.

To the physicians among us who choose to remain ill by allowing their alcoholism or other addiction to go untreated, I urge you to let go of your fears and to avail yourselves of this program. This program is not the inquisition you might fear it to be, as I did. I know now it is not.

If you are abusing alcohol or using drugs, you are

sick. Our program offers a cure. It is incumbent on you to take the first step. If you will work with this program, you can recover. If you do not work with this program, your mind and your body will continue to degenerate and soon you will die. **I know. I almost did!**

• • •

### Hope Exists

My disease of addiction smoldered for many years before catching on fire with the use of cocaine. I suffered for many years, exhibiting this disease's characteristics of dishonesty, egocentricity, and hostility before it came to light during my residency.

It was at this point that Med-Chi's Committee on Physician Rehabilitation and others intervened on my behalf and offered me a means to recover. Today, after accepting my disease and the wreckage I had created in my personal and professional life, I am grateful. Hope exists, and one day at a time, I am learning to become happy and practicing the kind of medicine I enjoy.

### Doing It Alone

**For years I have been fighting addiction to alcohol. Now I am practicing medicine regularly and could not have done so without the treatment program. I am most grateful to be in a remission, having reached this point after doing as directed by the specialists who direct the program.**

**Our sickness is manifest in our "abuse" of alcohol and/or addiction to other drugs.**

**"Doing it Alone" can lead to deterioration and death.**

### I Surrendered

My name is not being revealed in this personal history because anonymity is the spiritual foundation of the recovery programs I attend. I can, however, say that I am a grateful recovering alcoholic and drug addict. It is through the help of the Med-Chi Committee on Physician Rehabilitation that I have been able to be restored to a life worth living. Without the Committee's help, I most certainly would have died.

My drug addiction and alcoholism began at age 15 with marijuana and alcohol. My first drinking experience resulted in a blackout. I continued to experiment with other drugs. To paraphrase Will Rogers, "I never met a drug I didn't like." Despite intermittent remissions and exacerbations the overall pattern of my disease was one of progressively increasing severity of illness.

Nevertheless, I did well academically and in the late 1970s entered medical school. During the first two years, my drug and alcohol use was somewhat restrained. Yet with the less-structured clinical years, my addiction was off and running.

In the spring of my senior year of medical school, while under the influence of narcotics, sedatives, and alcohol, I was involved in a head-on collision and hospitalized. Fortunately, no one else was injured. Even more fortunately, a classmate phoned Dr. Charles Whitfield and was steered to the Med-Chi Committee on Phyisican Rehabilitation. My classmate was afraid I would die as a result of my drug addiction and wanted to get me help. The Committee's role is, indeed, one of advocacy and support while providing the firm guidance needed to coerce me into early recovery.

A discrete investigation was made. I was totally unaware of this. When enough information had been gathered, I received a letter from Dr. Joseph Chambers, Chairman of the Committee, advising me that I was in need of the Committee's help for a problem with substance abuse. They asked me to set up a meeting with Drs. McDermott and Dixon. I did not realize these physicians were to be my "intervention team."

We met at the hospital where I had begun my internship, and I was confronted with the destruction of my ability to function, which had been brought about by my addiction. Despite my anger and denial, I was convinced to attend AA meetings and enroll in outpatient group therapy. At the time, I thought the Committee was being punitive. I now realize their loving care saved my life.

The Committee recommended inpatient treatment, which I vehemently refused, and I did begin to improve in outpatient treatment. But outpatient treatment was not sufficient in my case, and I relapsed dramatically almost one year after my initial confrontation. At this point, I realized I would have to enter a four-week inpatient program. With the Committee's support, I entered such a treatment facility. The Committee was also instrumental in securing for me the support of my Chief of Service in the Residency Program where I now had completed my internship. Without the Committee's support, my Chief of Service never would have been able to persuade the hospital to allow me to complete my postgraduate training.

After I finished inpatient treatment, I had another relapse. Yet I was able to continue with treatment. The severity of my disease was diminishing. The Committee continued to support me. Finally, I was able to begin solid recovery based on complete abstinence from all drugs and alcohol.

It has been some time since my last use of drugs and alcohol, yet my attending AA/NA meetings is at a greater frequency than it was early in my addiction.

The fellowship has so much more to offer than merely stopping my active addiction. AA/NA meetings help me achieve new levels of personal, emotional, and spiritual growth. Early in my addiction, I did not want to recover but simply wanted to get the Medical Society off my back. With further attendance, I became envious of the quality of life I saw exhibited by those members in recovery. Eventually, I wanted what they had, and at that point "I surrendered." I knew my life had become unmanageable through my use of drugs and alcohol. I came to believe I could recover, as I now knew others who had recovered and were willing to help me. Through the working of the 12 Steps Program of AA/NA, I have been given the greatest gift of all: the freedom to be myself and to like and respect myself.

Some colleagues have commented that I simply replaced my addiction to alcohol and drugs with an addiction to AA/NA. My view is somewhat different; I like to discuss addictions versus what I refer to as dependencies. Addictions are negative; they cause pain, distract from a full life, and diminish us human beings. Dependencies are positive, they bring joy, expand our horizons, and enlarge our human dimensions; they improve our quality of life. As an example: a diabetic is dependent on insulin for a good quality of life; he is not an "insulin addict." A patient with COPD my be dependent on supplemental oxygen for a reasonable quality of life; he is not an "oxygen addict."

In my case, alcohol and drugs were my addictions. They subtracted from my life. AA/NA have become my dependencies. They enhance the quality of my life, and quality of life is exactly the reason I continue to attend AA/NA. I'm grateful for their existence.

And above all, I remain grateful for the care and support of the Med-Chi Committee on Physician Rehabilitation. Without their help, I would have died. Through their efforts on my behalf, I have been able to enjoy both professional and personal success. My self-respect has been restored. These people, the members of the Committee, whom I once viewed as my worst enemies, I now appreciate as having been my best friends. They saved my life.

• • •

## Summary

In this time of increased pressure to deal with physicians in a punitive manner, it is vitally important that we not lose sight of the enormous value that a confidential, nondisciplinary program has in attracting and in effectively treating physicians suffering from alcoholism and drug addiction.

The danger is that well-meaning public advocates responding to sensational media stories will destroy the credibility and effectiveness of such a program by insisting that every name be reported to the Commission on Medical Discipline. In that event, colleagues, nurses, patients, and families will stop making reports because they will not wish to harm the physicians.

**Experience has shown that when the Impaired Physicians Program becomes disciplinary in nature, the reports stop coming in (the most recent examples are Connecticut and Massachusetts). The impaired physicians go unreported unless their disease causes a major infraction in their practice, and then they are dealt with as disciplinary cases.**

Ironically, a punitive "mandatory reporting" law results in less reporting, not more. Furthermore, the reporting does not occur until the disease has progressed to a very late stage where it begins to affect job performance in a measurable way.

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A/MMJ

# Substance Abuse among Health Professionals

*KARL V. GALLEGOS MD, FREDERICK W. VEIT MD, PHILIP O. WILSON MD, THOMAS PORTER PhD, and G. DOUGLAS TALBOTT MD*

**Chemical dependence is believed to be a leading occupational hazard for physicians and other health professionals. This study compared the abuse of alcohol and other drugs among 1,971 chemically dependent health professionals who have been assessed and/or treated by the Georgia Alcohol and Drug Associates. Significant differences were seen between professional groups with respect to age, sex, the kinds of substances abused, the number of drugs abused, and the route of administration.**

From the Medical Association of Georgia's Impaired Physician's Program (Drs. Talbott and Wilson), The Georgia Alcohol and Drug Associates (Drs. Gallegos, Wilson, Talbott, Porter), and the Caduceus Foundation (Drs. Gallegos, Veit, Wilson, and Talbott). Reprints: Dr. Gallegos, Georgia Alcohol and Drug Associates, Inc., Ste 100, 4015 South Cobb Dr., Smyrna, GA 30080.

The Medical Association of Georgia (MAG) recognized the problem of impairment among physicians and began the process of funding and implementing a specialized program to treat impaired physicians in 1975. Major program elements include the identification, intervention, assessment, treatment, and rehabilitation of physicians[1,2] and other health professionals impaired by chemical dependence and other emotional disorders. Under the auspices of MAG, the program has achieved national recognition. Physicians and other health professionals from throughout the nation have been referred to it. Since the program's inception, more than 2,100 health professionals (HPs) have presented for evaluation and treatment of impairment.

Chemical dependence is a primary disease[3–6] characterized by continuous, compulsive use of mood-altering substances (including alcohol) despite adverse consequences. Physician impairment was comprehensively defined in the 1972 report of AMA's Council on Mental Health as "the inability to practice medicine with reasonable skill and safety to patients by reason of physical or mental illness, including alcoholism or drug dependence."[7]

The prevalence of impairment from alcoholism, substance abuse, and other mental disorders in the general population of adults may be as high as 19 percent.[8,9] While HPs may be at no greater risk for these impairments than is the general population, the damage done to the profession and to the public by those working as HPs while impaired is of increasingly great concern.[10] Consequently, effective methods for the prevention of impairment among HPs need to be implemented by these professional groups. Every HP must be exposed to information about impairment prior to their graduation from professional schools and during the continuing education process.

In this article we describe the population of HPs referred for evaluation and treatment, quantify the differences seen between the groups with respect to patterns of substance abuse and other variables studied, discuss the clinical and practical implications of the findings of the investigation, and make recommendations to the major health professional groups studied (physicians, nurses, dentists, and pharmacists) for future research and prevention.

## Methods

The actual population includes all HPs (N = 2,015) who presented for assessment of impairment to the MAG Impaired Physician Program between July 1975 and August 1987. These individuals have been grouped for the purpose of analysis into five distinct professional categories. Of those who were included in the physician group (N = 1,352), 1,268 were medical doctors, 74 were doctors of osteopathy, and 10 were medical students. There were 127 pharmacists and 129 dentists. The group entitled "Other HP" (N = 104) includes 26 veterinarians, 13 mental health counselors, 12 podiatrists, 9 physician assistants, 6 psychologists, 6 hospital administrators, 5 PhDs from health-related disciplines, 4 chiropractors, and 23 other paramedical health professionals. Within the nurse group (N = 303) there were 211 registered nurses, 36 licensed practical nurses, 50 certified nurse anesthetists, and 6 nursing students. Most of the individuals assessed (98.5 percent) were U.S. citizens, and they represented 49 states.

The Other HP group is a study sample for comparison purposes only. From a purely sociologic perspective, there are tremendous differences within this group. However, as an aggregate of varied health care providers, they appear to represent a measure of central tendency with respect to most of the variables studied. Consequently, we believe this group depicts an interesting comparison sample, and the biases imposed by such a comparison are understood to be present.

The assessment procedure was performed by the Georgia Alcohol and Drug Associates (GADA), an organization of certified addictionologists and psychiatrists who specialize in (1) the assessment of impairment of health professionals, (2) intervention services, (3) inpatient and outpatient treatment of chemical dependence, and (4) the follow-up and aftercare of patients who have been treated. A comprehensive addiction evaluation, psychiatric interview, medical examination, family and social history, and psychometric testing are done routinely either at the time of admission to treatment or to determine the need for treatment.

The chart of each individual in the actual population was reviewed retrospectively by the Division of Data and Statistics Data of the Caduceus Foundation, an independent nonprofit corporation specializing in the study of impairment among HPs.

Forty-four individuals from the actual population had no evidence of chemical dependence by assessment criteria. The remaining health professionals (N = 1,971) comprise the study population. All persons in the study population were chemically dependent.

### Statistical Analysis

Pearson's chi-square goodness-of-fit was performed comparing the distribution of health professional groups in the actual population with the distribution of professional category proportions for the entire population[11] of all US health professionals (the target population). The sex distribution of each professional group was compared with that of the target population.

Student's t-test was used to determine differences between the physician group and all other groups with respect to age, and 99 percent confidence intervals were calculated. Next, the chi-square test and analysis of variance (ANOVA) was used to investigate differences with respect to various demographic variables (sex, race, and the history of previous alcohol and drug or psychiatric treatment) between and within professional groups in the actual population. Finally the chi-square test was used to find differences with respect to patterns of substance abuse (drugs of choice, classification of substance abuse, route of administration, and so on) within the study population.

### Results

By comparison with the distribution of US health professionals (Table 1), the actual population (and the study population) is not a representative sample of all such professionals in this country. Physicians are significantly overrepresented ($X^2 = 333.66$; $p < .001$). While pharmacists and dentists are represented proportionally in relation to the actual population, nurses ($X^2 = 35.769$; $p < .001$) and other HPs ($X^2 = 12.749$; $p < .05$) are underrepresented. In the general population of HPs, females comprise 14.6 percent of all US physicians,[12] 15.8 percent of the pharmacists,[13] 2.4 percent of all dentists,[14] and 97 percent of all registered nurses.[15] Males are significantly overrepresented in each of the groups as compared to the actual population.

Analysis of the study's demographic data (Table 2) reveals that physicians are the oldest ($p < .001$) and nurses are the youngest group. With 99 percent confidence we can say that on the average, physicians are from 5.9 to 11.3 years older than pharmacists, 1.0 to 6.3 years older than dentists, from 1.5 to 7.3 years older than the other HPs, and from 8.2 to 11.8 years older than nurses. More than 61.7 percent of all the nurses were 35 years of age or younger.

There is a predominance of males in each of the groups except in the nurse group, where only 20.1 percent are male. When both sex and age are considered, women in each professional group are significantly younger ($p < .01$) than their male peers. There is no significant difference between the groups with respect to minority representation. Pharmacists are the group more likely to present for their first inpatient treatment to the MAG Impaired Health Professionals' Program. However, there is no significant difference between the groups with respect to the number and kinds of previous treatment, despite the major age differences seen.

Unlike physicians and dentists represented in the study group (Table 3), pharmacists and nurses appear more likely to be polydrug addicted, and they are less

**Table 1. Distribution of All US Health Professionals by Group Compared to Impaired Health Professionals**

| Occupation | Percent of Total US Health Force* | Percent of Total Impaired Health Professionals Program | Goodness of Fit Square |
|---|---|---|---|
| Physicians (Includes Doctor of Medicine and Doctor of Osteopathy) | 9.83 | 67.10 | 333.657‡ |
| Pharmacist | 3.29 | 6.30 | 2.754 |
| Dentist | 2.82 | 6.40 | 4.545 |
| Other HP | 21.84 | 5.16 | 12.749† |
| Nurses | 62.22 | 15.04 | 35.769‡ |
| | ($X^2 = 389.474$; DF = 4, $p < .0001$) | | |

* Source: US Department of Labor Statistics, 1981,[11] table revised from the American Medical Association: *The American Health Care System 1984.*

† $p \leq .05$

‡ $p \leq .001$

## Table 2. Demographic Characteristics of Health Professionals Assessed for Impairment (7/75–8/87)

| | Physicians (N = 1,352) | Pharmacists (N = 127) | Dentists (N = 129) | Other HP (N = 104) | Nurses (N = 303) |
|---|---|---|---|---|---|
| Age (in years) | | | | | |
| Mean† | 44.60 | 36.00 | 40.98 | 40.18 | 34.63 |
| SD | 11.39 | 9.52 | 9.25 | 10.30 | 8.20 |
| t-value | | 8.24 | 3.50 | 3.91 | 14.42 |
| 99% Confidence Limits | | (5.91–11.29) | (0.96–6.28) | (1.51–7.33) | (8.19–11.75) |
| Sex | | | | | |
| Male | 95.04 | 88.98 | 99.22 | 79.81 | 20.13† |
| Female | 4.96‡ | 11.02 | .78† | 20.19 | 79.87† |
| | ($X^2$ = 236.001; DF = 4, p < .0001) | | | | |
| Race | | | | | |
| White | 96.38 | 98.43 | 98.45 | 95.19 | 97.69 |
| Black | 2.29 | 12.57 | 0.00 | 3.85 | 1.98 |
| Other | 1.33 | 0.00 | 1.55 | 0.96 | 0.33 |
| | ($X^2$ = 6.115; DF = 4, p = .1907) | | | | |
| Previous psychiatric and/or alcohol & drug treatment | | | | | |
| None | 41.12 | 57.48 | 48.84 | 46.15 | 41.25 |
| Outpatient | 11.32 | 8.66 | 7.75 | 7.69 | 11.22 |
| Inpatient | | | | | |
| 1 Only | 24.63 | 22.05 | 25.58 | 19.23 | 29.70 |
| 2–3 | 17.60 | 7.09 | 11.63 | 18.27 | 14.85 |
| >3 | 5.33 | 4.72 | 6.2 | 8.65 | 2.97 |
| | ($X^2$ = 17.078; DF = 4, p = .0019) | | | | |

† p ≤ .001
‡ p ≤ .05

## Table 3. Patterns of Substance Abuse among Impaired Health Professionals Assessed for Impairment by Georgia Alcohol and Drug Associates (7/75–8/87)

| | Physicians (N = 1,318) | Pharmacists (N = 127) | Dentists (N = 126) | Other HP (N = 102) | Nurses (N = 298) |
|---|---|---|---|---|---|
| Number of drugs reported abused | | | | | |
| 1 Only | 29.21 | 18.90 | 29.37 | 33.33 | 18.79 |
| 2–3 | 34.90 | 24.41 | 35.71 | 26.47 | 26.61 |
| ≥4 | 35.89 | 56.69 | 34.92 | 40.20 | 54.70 |
| | ($X^2$ = 20.457; DF = 8, p = .0087) | | | | |
| Reported classification of substances abuse | | | | | |
| Alcohol | 26.56 | 15.75 | 25.40 | 29.41 | 14.43 |
| Alc & drugs | 49.47 | 51.18 | 45.24 | 48.04 | 56.04 |
| Drugs only | 23.98 | 33.07 | 29.37 | 22.55 | 29.53 |
| | ($X^2$ = 12.222; DF = 8, p = .1416) | | | | |
| Route of administration of drugs of choice | | | | | |
| Oral* | 60.85 | 74.02 | 63.57 | 61.76 | 36.58 |
| Parenteral* | 39.15 | 25.98 | 36.43 | 38.24 | 63.42 |
| | ($X^2$ = 31.484; DF = 4, p < .0001) | | | | |
| Reported abuse by drug class† | | | | | |
| Stimulants‡ | 22.11 | 35.43 | 16.26 | 23.40 | 21.74 |
| Narcotics* | 47.19 | 59.06 | 52.38 | 32.35 | 68.12 |
| Hypnotics | 29.92 | 36.22 | 24.39 | 27.66 | 27.09 |

* p ≤ .01
† Totals do not equal 100%
‡ p ≤ .05

likely to be exclusively alcohol abusing. Coincidentally, more than 81 percent of nurses and 81 percent pharmacists were found to be addicted to at least two drugs. Over half of both these occupational groups reported addiction to four or more drugs (56.7 percent of pharmacists and 54.7 percent of nurses). When age was compared to the classification of substance abuse for each of the groups, younger health professionals (those less than 40 years of age) were less likely to be exclusively alcohol abusing and were more likely than older professionals to report abusing drugs only. Young physicians, pharmacists, and nurses, reported abusing "drugs only" more frequently than the young members of the dentist and other HP group.

More than 68.1 percent of nurses reported abusing narcotics, and they frequently abused these drugs parenterally. A nurse who reported abusing narcotics was more likely to report abusing many different narcotics. As a group, nurses were least likely to report being cross-addicted to drugs from many different classes. Unlike nurses, physicians and particularly pharmacists frequently abused many different classes of drugs. Pharmacists (35.4 percent) were more likely than physicians, nurses, dentists, and other HPs to abuse stimulants. They reported the abuse of sedatives (36.2 percent) more than any other occupational group, and they abused narcotics (59.1 percent) more frequently than any other professional group except nurses. Pharmacists were least likely to abuse their drugs parenterally. Analysis of abuse by drug class revealed there was no difference between the groups with respect to the abuse of sedative hypnotics.

Analysis of the twelve drugs (Table 4) most frequently reported to be abused by each of the groups reveals: (1) alcohol is the drug most frequently abused by each group; (2) there is no significant difference between the groups with respect to cocaine abuse; and (3) there are significant differences between the groups with respect to the abuse of meperidine hydrochloride, amphetamines, oxycocodone hydrochloride, fentanyl citrate, and morphine sulfate. The differences seen between the groups, with respect to drug of choices, classification of substance abuse, number of drugs abused, and route of administration appears to be related more to profession than to age or sex.

## Discussion

**Clinical and Practical Implications** National concern about drug abuse in this country has prompted recent emergency legislation authorizing $1.7 billion for increased government efforts[16] to reduce both the supply and demand for drugs (Public Law 99-570, The Anti-Drug Abuse Act of 1986). No part of these funds has been allocated to study patterns of substance abuse among HPs or to determine the extent of the problem. This is unfortunate not only because of the direct impact impaired health professionals have on the welfare of society as a whole but also because of the invaluable insight into substance abuse that might be gleaned from a study of this unique population.

We found that physicians (and other HPs) provide a unique and good population for the investigation of chemical dependence for many reasons.

- They are cooperative in that they understand the need for research, and they enjoy being part of an investigation

**Table 4. Drugs Most Frequently Reported Abused by Impaired Health Professionals Assessed for Impairment by Georgia Alcohol and Drug Associates (7/75–8/87)**

| Drugs Most Frequently Reported Abused* | Physicians (N = 1,318) | Pharmacists (N = 127) | Dentists (N = 126) | Other HP (N = 102) | Nurses (N = 298) |
|---|---|---|---|---|---|
| Alcohol | 70.18 | 55.91 | 65.08 | 70.59 | 59.73 |
| Meperidine hydrochloride† | 25.72 | 14.96 | 29.37 | 12.75 | 43.62 |
| Diazepam | 16.54 | 22.83 | 19.84 | 18.63 | 18.79 |
| Amphetamines‡ | 10.24 | 18.90 | 5.56 | 10.78 | 7.38 |
| Cocaine | 10.24 | 15.75 | 9.52 | 14.71 | 14.09 |
| Marijuana | 9.79 | 12.60 | 11.11 | 15.69 | 16.78 |
| Oxycodone hydrochloride§ | 9.10 | 20.47 | 21.43 | 3.92 | 8.72 |
| Codeine sulfate | 7.21 | 17.32 | 7.94 | 5.88 | 10.74 |
| Pentazocine | 6.90 | 3.94 | 6.35 | 6.86 | 4.36 |
| Fentanyl citrate† | 6.53 | 0.00 | 1.59 | 1.96 | 11.74 |
| Propoxyphene | 4.55 | 6.30 | 4.76 | 3.92 | 5.03 |
| Morphine sulfate† | 4.10 | 7.09 | 1.59 | 2.94 | 15.44 |

* Total of drugs abused excedes 100% because of polydrug addiction
† $p \leq .01$
‡ $p \leq .05$
§ $p \leq .001$

- Unlike nonhealth professionals, they can give an exquisitely detailed history of their substance-abuse patterns, and due to licensing requirements they are easy to track in aftercare
- They have been well characterized[11–15]

We believe that investigation of chemical dependence among HPs will lead to new perspectives regarding chemical dependence in the health care field and will result in recommendations to industry and the general population about the treatment of this major public health problem.

Most HPs studied reported obtaining the substances they abused from the workplace or from another health professional peer. If the rate of chemical dependence is no greater among HPs than in the general population (and a conservative estimate of 10 percent is used to calculate the prevalence of the disease), it is likely that more than 450,000 health professionals in this country are affected. Furthermore, the workplace provides a fertile environment for the progression of disease because of drug availability, difficulty in recognizing the problem, and the denial in the affected health professional.

This study has provided evidence that the drug of choice (and consequently, route of administration) among chemically dependent HPs appears to be related more to profession than age or sex.

**Certain professional groups have greater access to drugs than others. Within these professions, improved mechanisms for monitoring the presence of substance abuse must be sought.**

When the disease has been recognized in the individual, treatment must be recommended. Reentry into the profession after the appropriate treatment must be done safely both for the recovering health professional and for the patients they serve.

Little attention has been dedicated to the occupational risk for the development of chemical dependence during the process of formal education in professional schools. This appears to be in part related to the limited fund of knowledge about the problem and in part to a kind of "global denial" that exists. Deterring the initiation of substance abuse appears to be a very complex problem.[17,18] However, the detection of disease and initiation of treatment is relatively easy, and treatment has been shown to be effective in returning HPs to the workplace[19–22] when an aftercare program of recovery is maintained by the patient and on-going surveillance is administered by the profession.

**Biases of the Study** The study group is not a representative sample of all US health professionals. Nurses are grossly underrepresented as compared to the actual population. This finding is believed to be related to several interacting factors including (1) a referral bias:[23] the MAG program has been reported to be a program primarily for impaired physicians, and much of the publicity related to the program has been published in literature most often read by physicians; (2) an admission rate bias:[24] nonphysician health professionals (particularly nurses) frequently do not have the insurance or financial resources to seek treatment in the program; and (3) a nursing exodus: speculation exists that when nurses are confronted about their disease, they more frequently leave nursing[25] than do physicians, dentists, or pharmacists.

Women in each of the professional categories are underrepresented in the study population. This is believed to be related to both an ascertainment and diagnosis[26] bias: (1) females, in general, are underrepresented in the population treated for chemical dependence by GADA and (2) women who seek treatment for their "problems," which may be caused by chemical dependence, frequently may be diagnosed as having psychiatric illness and not chemical dependence. The females in the study group were younger and were found to be more likely than men to have had some previous psychiatric intervention despite the fact that they report a substance-abuse history equivalent to their male peers (in terms of dose, frequency, and duration of drug use).

The substance-abuse history was obtained from the patient by many different examiners. Data about drugs abused, the route of administration of these drugs, and the frequency and duration of substance abuse were obtained early in the course of treatment. Denial (recall bias) may have resulted in underreporting.[27,28] Measures to control for misclassification and these kinds of reporting biases could not be controlled in this retrospective study.

Another kind of potential misclassification bias[29] exists in the investigation. Approximately 1.8 percent of the physician population had another professional degree (RPh, PhD, for example). Individuals were classified according to the professional group in which they reported last practicing prior to admission for assessment or treatment.

## Conclusions

The many forces (behavioral, physiological, sociological, and genetic) believed to predispose an individual

to chemical dependence (and certain of the psychiatric disorders) may have only "chance" association with the choice of profession. Although a HP's profession cannot be shown to be causally associated with a specific impairment (or a specific drug of choice), it may be indirectly or directly associated with a single (or several) determinant(s) for the impairment. This study supports the hypothesis that drug access (afforded to chemically dependent HPs by their profession) appears to be a risk factor for drug of choice.

Chemical dependence, however, is a complex disorder with presumed multifactorial etiology. Risk factors (other than access to drugs) need to be more fully understood. A new finding from our research that looks at genetic influences for the disease has revealed that approximately 85.6 percent of all chemically dependent HPs treated (prospective study of family history of chemical dependence, now in press) have a positive family history of addiction in offspring, siblings, parents, or grandparents.

To reduce the occurrence of the common methodologic problems associated with research in chemical dependence, collaborative research between treatment organizations and each of the major health professions is necessary. Currently several state medical society impaired physician programs, in collaboration with the American Medical Association, are working together to develop a mechanism for uniform data collection,[30] standardized definitions, and variables for study. The goals of the project are to (1) provide an accurate assessment of the scope of impairment among physicians and other HPs, (2) more clearly define impairment and set categorical priorities with respect to each of the major impairments affecting HPs, and (3) develop and implement research and control programs to reduce the incidence and prevalence of these impairments among HPs. Improved surveillance of aftercare and recovery, which will be monitored by the participating state medical societies, will lead to improvements in patient management and decrease the kind of biases that occur when treatment centers do their own follow-up studies. Secondary gains from the project will include revised curriculum for the education of HPs and new insights pertinent to improved intervention and treatment of this disease within the general population.

We believe these factors play a role in the development[31] of impairment in HPs:

- Genetic predisposition and environmental exposures
- Stress and poor coping skills
- Lack of education regarding chemical dependence and other impairments that affect HPs
- Absence of effective prevention and control strategies
- Drug availability in the context of a permissive professional and social environment
- Denial

By 1988 standards, problems related to chemical dependence among health providers can be reduced by early detection, intervention, treatment, and close aftercare surveillance of recovery.

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# Drugs Used by Impaired Health Professionals

*ANTHONY TOMMASELLO MS*

**There is no doubt that physicians are a population at risk for substance abuse and chemical dependence. The unique aspects of their exposure patterns seem to be less important than the overriding concern that physicians in need of intervention and treatment are recognized as such and are given the opportunity to receive it with dignity.**

From the University of Maryland School of Pharmacy.

The application of epidemiological methods to study drug use, drug abuse, and chemical dependence has won approval of the scientific community.[1] It is now acceptable to study exposure patterns, to search for risk factors, compute prevalence rates and attack rates, to study the etiology and consequences of drug abuse, and to implement and study the effectiveness of prevention and intervention programs. Data on the general population are available, as are data reflecting drug use trends among specific groups of Americans. These data-gathering efforts provide the potential for assessing whether the risk of drug abuse and of chemical dependence differs between the specific groups of interest and the general population.

Problems of definition are encountered early in the exploration of the question of drug abuse and chemical dependence. (Chemical dependence and addiction will be used synonymously in this paper). Historically the term addiction was applied only in cases where psychological dependence, tolerance, and physical dependence could be demonstrated as concurrent manifestations. Gradually the medical community has come to the understanding that chemical dependency is primarily a behavioral disorder and that physical dependence is not a necessary condition in the diagnosis of the addictive state. Jerome Jaffe as early as 1975 recognized the need to redefine "addiction." He advanced the idea that addiction is "An overwhelming involvement with the use of a drug, the securing of its supply with a high tendency to relapse after withdrawal."[2] Since then David Smith has provided a more concise conceptualization of addiction as "Compulsive use with loss of control and continued use in spite of adverse consequences." Physical dependence may be involved in some cases of addiction depending on the drug, the dose used, and the frequency and duration of use.

On the other hand, drug abuse may be viewed as the occurrence of a problem due to drug use. A helpful analogy might be that drug abuse is to addiction what a snapshot is to a photo album. One is a singular event, the other is an historical account of many events woven together by the common theme of problems associated with drug involvement.

## Early Studies on Drug Use

Interview and questionnaire data are the basis for much of our current knowledge about the epidemiology of the drug epidemic. Two major national studies are conducted on a regular basis using this methodology: the National High School Survey and the National Household Survey. As the names imply, the sampling frames of the two studies produce some overlap in that students sampled in their high schools may also, by chance, be sampled in their home. The household survey covers a broader age range (12 to adult).

Drug use patterns are self-reported responses in both these projects. Varying levels of drug involvement are ascertained by asking if the subject has "ever used" a substance (exposure), "used in the past year" (current use), or "used in the past month" (recent use). While these questions do not distinguish drug use from chemical dependence, the data do provide a description of the national trend reflecting various levels of involvement with individual drugs. Thus the peak prevalence of marijuana exposure among high school seniors was 60.4 percent in 1979, with a steady decline ever since. Prevalence of current and recent marijuana use among high school seniors follows that same trend. In that same year, the household survey indicated that the exposure prevalence among those 26 years and older was 19.6 percent. While there are obvious limitations to the inferences that can be drawn from this simple excerpt of the data sets, the capability of making such comparisons is an important epidemiological advancement.

Perhaps the first systematic attempt to examine differences in drug use patterns between physicians and the general public was done by Valliant and colleagues.[3] They prospectively traced the drug using behaviors of 45 physicians and 90 controls matched for intelligence and occupational perserverance. These men were classmates during their college years prior to their career selection. All the men were considered to be "relatively free of physical, emotional and academic difficulties" at the time of their selection into the study, which began in the late 1930s. The men were followed for roughly thirty years by "extensive questionnaires mailed on the average once every two years and by occasional personal interview."

Differences between physicians and controls were considered from questionnaire responses relative to drug use behavior in 1949, 1953, 1957, 1964, and 1967. The data reveal few differences between the drug use patterns of these two groups of men. A comparison of

alcohol use in the two groups shows similar proportions in five levels of involvement from "rare or occasional" to "social or occupational damage." An important finding of the study is the progressively greater proportion of both groups over the years who reported problems with alcohol use. The prevalence of problem drinking increased from a low of 3 percent at age 28 to 16 percent at age 46. When alcohol and drugs were examined together a significantly greater proportion of physicians reported problems. Deeper analysis showed the difference to be almost entirely made up by sedative use. The study reports: "In a population selected for health, then, much of the physicians' increased use of drugs is accounted for by sleeping pills."

It should be pointed out that this study was begun prior to the onset of the drug epidemic of the 1960s. Thus the reported difference between physicians and matched controls may have to be reassessed in a contemporary cohort. The current medical literature includes no such report. The focus appears to be on drug use patterns of physicians and medical students. Even here few opportunities exist to make meaningful comparisons across studies. However within a single study the opportunity exists to explore the difference between drug use self-reports of students and practicing physicians.

A 1971 survey of 1,057 medical students and 1,314 physicians revealed the marijuana exposure rate among students to be 52.1 percent with 30.9 percent claiming current use. Six hundred eighteen of these students attended school in the Northeast United States. Of this Northeastern group 59.1 percent were exposed and 35.5 percent claimed current use of marijuana. Only 20.9 percent of the practicing physicians in this study reported exposure with a much smaller 6.4 percent admitting current marijuana use. Among the Northeastern physicians in this group (n = 647), 19.2 percent reported marijuana exposure while only 6.2 percent admitted current use.[4]

## Recent Studies

A mailed questionnaire survey in a New England state conducted in 1982 asked medical students and young physicians about their drug use.[5] The better than 60 percent response rate provided a sample of 134. By far the drug most frequently used was alcohol. Only 6 percent of either group identified themselves as abstainers in the month prior to the survey. The next most frequently used substance was marijuana with 61 percent reporting exposure and 28 percent reporting current use. Cocaine exposure was reported by 19 percent with 8 percent admitting current use. Recreational exposure to hallucinogens, amphetamines, sedatives, tranquilizers, and opiates was reported by 16 percent, 12 percent, 7 percent, 6 percent, and 6 percent, respectively, of the sample. A later study (1984) by the same research group differentiated between recreational use and drug use for self-treatment.[6] They reported the recreational marijuana exposure prevalence among 504 medical students to be 72 percent with 34 percent admitting current use. Physicians surveyed in the same state (n = 500) yielded a marijuana exposure prevalence of 34 percent with 8 percent reporting current use. Recreational use of opioids was low among both students (8 percent exposure) and physicians (4 percent exposure). However exposure to opioids for self-treatment was considerably higher at 21 percent and 23 percent respectively for students and physicians. Similarly, recreational tranquilizer exposure was low in both groups (7 percent for students and 3 percent for physicians) but self-treatment with tranquilizers was much higher (14 percent for students and 23 percent for physicians).

The surveys cited above sampled from a population expected to be healthy. The physicians and medical students were participating actively in the pursuit of their practice or studies. Another perspective on the question of which drugs physicians use can be gotten by inspecting the records of those seeking treatment for addiction problems. Such a study, reported by Johnson and Connelly,[7] reviewed the records of 50 physicians entered into treatment at a short-term alcohol and drug unit during the five-year period from 1974 through 1979. These were all the physicians admitted to the alcohol/drug unit in this period, and they represented 13.3% of the total admissions to the ward in that interval.

Aside from alcohol, which was the sole drug of abuse for 46 percent of the physicians, the most commonly used substance was meperidine. Alcohol in combination with other drugs was reported in 24 percent and drugs alone in 30 percent of the admissions. In addition to meperidine, other drugs mentioned in order of prevalence were pentazocine (seven cases), barbiturates and other sedatives (seven cases), and amphetamines (three cases). It would have been interesting to compare the case mix of physicians entering this treatment unit with the remaining population of the ward to see if their use of alcohol and drugs is similar to the general public.

Another treatment-based retrospective study was reported by the Georgia-based Impaired Physicians Program.[8] Records of the first 1,000 physicians admitted to the program from July 1975 through March 1986 were reviewed. It appears to be the largest study of physicians in treatment in recent time. Although the program is based in Georgia, physicians from 39 states, Canada, the United Kingdom, and Brazil were in the

study group. Medical students and nonphysician health professionals were intentionally excluded. The study group was predominantly male (96.1 percent) with a mean age of 45.3 years.

Alcohol was the most commonly cited drug of abuse (66.4 percent of cases) followed by meperidine (26.4 percent), diazepam (16.5 percent), and amphetamines (11.3 percent). All the remaining drugs were cited in fewer than 10 percent of the cases but included marijuana, cocaine, percodan, codeine, pentazocine, and fentanyl in descending order. These drugs were the ten most frequently recorded. Only 28 percent of the physicians reported abuse of a single substance upon admission into treatment. Strikingly, 38.9 percent of the patients reported parental use at some point in their addiction history. The authors' time-trend analysis reflected an increase in cocaine abuse that was absent from the records until 1980 but by 1986 was the drug of choice for about 29 percent of the admissions. They also noted that younger physicians more frequently abused multiple substances and that parenteral abuse is increasing.

In reviewing studies of health professionals it is important to keep the larger drug abuse epidemic in mind. For instance, the increase in polydrug abuse admissions among physicians from the 1970s study by Johnson to the 1980s study by Talbott is reflective of what treatment providers are seeing in contemporary practice. Another observation in line with this conceptualization is the finding by McAuliffe *et al.*[6] that physicians over 40 are less likely to be recreational drug users than are younger physicians. This survey was done in 1984 so that those over 40 (born prior to 1944) would have graduated from the college campus before the more permissive attitudes about exploring drug-induced alterations in consciousness gained widespread expression.

**In a broad sense it appears that drug abuse among physicians generally reflects the environment of their existence.**

There appear to be some peculiarities that describe drug abuse among physicians. For instance, the prevalence of parenteral abuse for the socioeconomic status they occupy seems rather high among physicians. The extent to which this is true awaits comparison studies of incident cases of physicians verses others of similar status who seek treatment. Another unusual finding is that meperidine is second only to alcohol as the drug of choice among addicted physicians. The dramatic difference reported by McAuliffe *et al.* between opioid exposure for recreational verses self-treatment purposes suggests that self-prescribing of opioids is a high-risk behavior. The words of Sir William Osler seem appropriate: "A physician who treats himself has a fool for a patient."

Easy access to drugs appears to have its liabilities. It would be interesting to compare the prevalence of meperidine abuse among physicians with other health professionals having similar easy access, such as pharmacists. Knowledge of drug pharmacology also may carry special risks. At a 1987 AMA conference on impaired health professionals, David Smith announced that physicians were turning to fentanyl abuse in a attempt to circumvent the discovery of their continued abuse of opioids by urinalysis during treatment. The extremely short half-life of this agent makes detection unlikely. It is even a more remote likelihood given the fact that few urine testing labs include fentanyl on their range of detectable substances.

Physicians are a population at risk for substance abuse and chemical dependence. The overriding concern is that physicians in need of intervention and treatment be recognized as such and given the opportunity to receive it with dignity.

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# Cognitive Impairment in Physicians

*DENIS J. MADDEN PhD*

**The concept of an impaired physician is a relatively recent one. Cognitively impaired physicians, a subgroup within this larger category, are those who have suffered some diminution of mental abilities because of some insult to the brain.**

From the Department of Psychiatry, University of Maryland, Baltimore.

In November 1972 the AMA Council on Mental Health issued a report entitled "The Sick Physician." In this report, the Council stated that "accountability to the public, through assurance of competent care to patients by physicians and other health professionals, is a paramount responsibility of organized medicine."[1] Thus was set in motion a sustained effort to address and deal with the impaired physician. Prior to this, only seven state medical societies had committees in place to deal with this issue. Even fewer considered the setting up of a committee to respond to this relatively new concept of an impaired physician. The AMA was concerned both with identifying and with helping physicians who were impaired. It was equally concerned with safeguarding the health of patients who might come to such physicians seeking medical care. Today, largely as a result of the AMA efforts, all fifty state medical associations have mechanisms to deal with impaired physician problems.

## Concept of Impaired Physician

"Impaired physician" generally refers to physicians who have problems associated with alcoholism, drug dependence, and mental illness. A smaller number present with problems resulting from physical disability. For physicians reported to the Physician Rehabilitation Program for the State of Maryland in 1986, these were the primary impairments and numbers:

| | |
|---|---|
| Alcoholism | 25 |
| Drug addiction | 29 |
| Psychiatric illness | 12 |
| Physical disability | 4 |
| Total | 70[2] |

Although not so well defined as to represent a distinct group, there are physicians who suffer from some form of cognitive impairment. These physicians have experienced a dampening of mental abilities because of some insult to the brain. They are not impaired because of poor training or failure to keep up with modern medical thinking. Physicians, like anyone else, are subject to the same kinds of cognitive deficits resulting from tumors of the brain, cerebral vascular disease, head injury, Alzheimer's disease, demyelinating disease, Parkinson's disease, brain infections, and toxic and metabolic brain disorders including alcoholism, drug abuse, and aging.

## Signs and Symptoms

All health care providers emphasize the need for early recognition and treatment of debilitating illnesses. Yet it appears that the functional impairment of physicians often goes unrecognized for long periods. There are several possible reasons for this.

First, there is among most primary care physicians a lack of understanding of psychiatric illnesses including levels of cognitive impairment. It is estimated that almost 30 million Americans suffer from some form of psychiatric illness within any six-month period. About 70 percent of these persons seek assistance by making a visit to a health care provider. However, only 10 percent seek assistance from a mental health specialist. Given the majority of persons suffering from some form of mental illness seek assistance from primary care physicians, one would wonder about the results of such consultations. One study indicated that only about 10 percent of those meeting research diagnostic criteria for substance abuse or mental disorder were recognized as such by the primary care physician. Results were better when focusing on major depression alone, with estimates of recognition ranging from 25 to 50 percent.[3]

Second, this lack of understanding is in large part due to poor training. Medical schools devote less than 1 percent of their required teaching time to an integrated approach to alcoholism and drug abuse.[4] Internal medicine residencies, for the most part, teach psychiatric concepts through utilization of inpatient psychiatric consultations. This limits the possibility of developing the ability to recognize and treat the many psychiatric problems that will be encountered in private practice. Family practice residencies do little better in their formation programs. While these residencies do attend to psychological issues and patient-physician interactions, they fail to provide equal attention to the assessment of psychiatric disorders. Family practice residents have relatively little interest in formal training in the diagnosis of specific mental disorders.[5] Even after being in practice and coming to know through experience and the literature that large numbers of patients with mental illnesses come to their primary care physicians for assistance, only about 32.2 percent of family practitioners who responded to a survey thought they needed further training in treating emotional and psychiatric disorders.[6]

Third, there is much denial on the part of the impaired physician. This denial often is supported by other physicians who are colleagues of the impaired

physician. Some overlook many deficiencies remembering only the many years of service the impaired physician offered the community. Family members also may join in denial. Some express anger over the fact that anyone could bring charges against their spouse. In one particular case, the spouse insisted on being present for the neuropsychological evaluation even though the items of exam had nothing to do with the specific complaint. The spouse wanted to be sure the examiner did not take advantage of her husband and say he did not know things that he did. In another instance, the spouse not only wanted to be present but also actually responded to the test items or interrupted and reexplained directions to her husband. This made for a very trying situation and gave further evidence of the level of impairment since the physician was not able to understand the directions put to him in the examination.

All the 11 physicians (Table 1) who came for neuropsychological evaluation of cognitive functioning were referred by a committee having some form of jurisdiction over them. During that same time, only one physician came on his own because of concerns with mentation. Over half were referred because it was believed the observed behavior possibly signaling cognitive impairment resulted from substance abuse or some other psychiatric illness. Only four of the eleven referred were sent for evaluation because the physician in question had suffered a more direct insult to the brain, for example, one physician had been unconscious for a period of six weeks 10 years prior to the evaluation.

Some of the behavioral signs that alerted colleagues that there might be a problem included:

- giving confusing orders to hospital personnel and then denying any such orders were given
- inarticulate speech
- examining patients and then returning to see them again not remembering they had been examined
- ordering drugs or treatment not related to the patient's complaints
- writing notes in charts with lines crisscrossing
- repeated complaints by physician colleagues and nurses that the physician was impossible to get along with
- inability to remember what was read or just said
- inability to think clearly in an emergency situation

**Table 1. Physicians Referred Over Two-years for Neuropsychological Evaluation**

| Patient Number | Age | Reason for Referral |
|---|---|---|
| 1 | 68 | Drug abuse |
| 2 | 34 | Depression with suicide attempt |
| 3 | 48 | Alcoholism |
| 4 | 68 | Some brain insult |
| 5 | 33 | Alcohol and drug abuse |
| 6 | 63 | Some brain insult |
| 7 | 64 | Some brain insult |
| 8 | 60 | Psychiatric illness |
| 9 | 25 | Memory loss and difficulty in concentration |
| 10 | 59 | Depression |
| 11 | 49 | Drug abuse and depression |

Despite all these documented complaints, the physicians themselves denied any problem, and some were angry that they had to submit to an examination. One physician who had a long-term problem with drug abuse denied ever "even making a blunder" in his medical practice. Not only did the physicians themselves deny any problems in their functioning, but also it was not uncommon to have other physicians call and send letters of support. Oftentimes, these testimonials told of the years of service the physician had given (sometimes to very poor patients) and other good works he had performed in his medical career. When other physicians came to the support of a colleague, they would make such statements as "this man is extremely diligent" or "he is the kind of physician you want to have treat you, he never gives up on a patient." This made it difficult for the examiner who was looked upon by the physician patient and by other physicians as acting in a judgmental or punitive manner. One physician referred did, in retrospect, admit he had a problem with alcohol. He went on to say, however, that when he was having his greatest difficulty with alcohol during his medicine rotation, he obtained his best evaluations from the attendings. He thus seemed to think his drinking would not interfere with his practice of medicine.

It was difficult for most of the physicians to come for a series of psychological tests that required them to respond to specific questions within certain time limits. The notion of being sent and then having the results scored and evaluated was stressful for most. Some responded to the stress by calling after the test and telling the examiner they had reconsidered some of the questions and wanted to change their response. Others called and said that when they came for the testing, family issues needing attention were distracting them and therefore they might not have given their best performance. Others called to say they had not slept well the night before the testing. These physicians did not appear to be fatigued and were, as a matter of fact, able to complete all the testing, which took at least one full day (and sometimes two) to administer. Some of the physicians talked about their previous experiences and unique aspects of their practice or mentioned the various senior physicians around town they worked with or who had referred patients to them.

### Tests Administered

An evaluation process begins when there is some question of a physician's competence to practice medicine. Neuropsychological testing is included along with practice competence examinations and recommendations of the Peer Review Committee in cases referred by the Physician Rehabilitation Program. The neuropsychological evaluation used most frequently includes an IQ measure, a level of academic achievement measure, and a complete Neuropsychological Test Battery, usually the Halstead-Reitan Neuropsychological Test Battery. The latter is reported to be the most extensively used method for clinical evaluation of brain behavior relationships.[7] The Halstead-Reitan Neuropsychological Test Battery is made up of several tests including:

- The Halstead Category Test
- Tactual Performance Test
- Seashore Rhythm Test
- Speech Sounds Perception Test
- Finger Oscillation Test

Tests of personality such as the Minnesota Multiphasic Personality Inventory (MMPI) or the Millon Clinical Multi-Axial Inventory (MCMI) are administered to obtain some reading of personality variables and to determine the test-taking attitude of the subject. The Wechsler Adult Intelligence Scale—Revised form (WAIS-R) is the most frequently used test to determine IQ levels. The Wide Range Achievement Test (WRAT), which provides measures in competence in reading, spelling, and arithmetic is used to measure levels of achievement.

After all these tests have been administered, an Impairment Index is computed. This is a summary value based on the subject's performance on each of the above tests. The Impairment Index is the proportion of tests that have results in the range characteristic of brain-damaged individuals.

However, to obtain a more comprehensive understanding of the behavior of an individual, it is also necessary to evaluate performance on each individual test. One test of particular help in evaluating cognitive functioning of physicians is the Halstead Category Test. Several characteristics make it different from any other psychological test. It is a complex concept formation test requiring the subject to note similarities and differences in stimulus material and then to postulate reasonable hypotheses about these similarities and differences. The hypotheses are then given a positive or negative reinforcement by the examiner who informs the subject whether the hypotheses are correct or incorrect. The subject then must adapt or change hypotheses based on the new information received from the examiner. In effect, the test presents each subject with a learning experiment in which the subject has opportunity to demonstrate flexibility in thinking as well as competence in abstraction.

In reviewing the results of some of the neuropsychological tests of physicians referred for evaluation (Table 2), one appreciates the assistance they provide in evaluating cognitive ability. On the Wechsler Adult Intel-

**Table 2. Neuropsychological Test Results of Physicians Referred Over Two-year Period**

| Patient Number | VIQ | PIQ | FSIQ | Read (percent) | Spell (percent) | Math (percent) | Imp Ind | Cat |
|---|---|---|---|---|---|---|---|---|
| 1 | 114 | 108 | 113 | 97 | 92 | 50 | 0.4 | + |
| 2 | 85 | 74 | 79 | 30 | 18 | 21 | 0.9* | + |
| 3 | 105 | 99 | 102 | 94 | 86 | 39 | 0.8* | + |
| 4 | 111 | 104 | 109 | 90 | 95 | 63 | 0.5* | + |
| 5 | 124 | 122 | 128 | 58 | 75 | 92 | 0.1 | − |
| 6 | 105 | 98 | 101 | 8 | 42 | 42 | 0.8* | + |
| 7 | 106 | 88 | 97 | 84 | 86 | 79 | 0.7* | + |
| 8 | 107 | 100 | 103 | 88 | 95 | 63 | 0.8* | + |
| 9 | 124 | 133 | 131 | 81 | 91 | 99 | 0.1 | − |
| 10 | 96 | 113 | 103 | 73 | 86 | 14 | 1.0* | + |
| 11 | 121 | 86 | 101 | 79 | 66 | 81 | 0.4 | + |

* Subject scored within the impaired range
† Subject score within the impaired range
VIQ = Verbal IQ
PIQ = Performance IQ
FSIQ = Full Scale IQ
Read = Reading
Spell = Spelling
Imp Ind = Impairment index
Cat = Halstead category test

ligence Scale-Revised Form, eight of the eleven physicians obtained Full-Scale IQ scores that were within the average or borderline range of current intellectual functioning. These scores in themselves suggest a high probability of loss of cognitive functioning since prior acquisitional skills probably were much greater. Aging must be taken into consideration, but even here aging could not entirely account for these relatively low scores for physicians. One of the oldest subjects (68 years old) obtained the third highest IQ score.

Reviewing results of the Wide Range Achievement Test, one obtains further helpful information. Physicians varied in performance from the 8th percentile to the 99th percentile. These percentile rankings indicate how the physician scores when compared with other adults within the same age group on the particular test. As previously mentioned, one of the most helpful measures in the test battery is the Impairment Index. The results of these eleven administrations showed seven physicians scoring within the impaired range, similar to individuals with known organic brain damage.

Test results of cases 7 and 8 give a good indication of how the Impairment Index from the Halstead Reitan Neuropsychological Test Battery is very helfpul in assessing cognitive abilities. In both these cases, the individuals obtained Full-Scale IQ scores in average limits. Their percentile rankings indicated levels of achievement in areas of reading, spelling, and arithmetic within very respectable ranges. The Impairment Indexes, however, indicate mild to serious impairment of adaptive abilities dependent upon organic brain functioning. When considering the Halstead Category Test alone, one sees that all the individuals who obtained Impairment Indexes in the impaired range also scored within the impaired range on the Halstead Category Test. Two other individuals scored in the impaired range on the Halstead Category Test but did not obtain an Impairment Index in the impaired range. Such information also is helpful in assessing cognitive abilities because it alerts the examiner to the possibility that an individual may have some difficulty in functioning in a situation where flexibility of thought along with reasoning abilities under the constraint of time is of great importance.

The neuropsychological test results in themselves do not supply sufficient information to determine whether a physician is impaired to a degree that he or she is not competent to practice medicine. Certainly, serious questions would arise on the basis of the neuropsychological test alone if an individual obtained an Impairment Index in the seriously impaired range (that is, from 0.8 to 1.0). The neuropsychological test results represent one part of the evaluation process.

## Further Considerations

Eleven physicians were referred over a two-year period for evaluation of cognitive abilities. It must be assumed that other physicians who might suspect some dampening of abilities or who might be approached by their colleagues have been evaluated privately. As mentioned, over the same period, only one physician came to this examiner voluntarily because of concerns over memory loss and difficulty in reasoning. This particular physician was found to be functioning within the very superior range on all measures. This information was of assistance to him and allowed him to more diligently pursue psychiatric intervention for an underlying depression.

The treatment of choice for physicians found to be cognitively impaired is determined by the etiological factors that account for these deficits. Thus, for example, individuals who seem to have lost some of their intellectual acuteness due to substance abuse or some other psychiatric illness would be treated for these disturbances and then reevaluated. After it has been determined that cognitive deficits are present, the practice of the physician should be monitored if he plans to remain in active practice. The nature and location of the practice are important factors to keep in mind when making such a decision.

Not all physicians referred for evaluation because of substance abuse obtained an Impairment Index in the impaired range. Seventy-five percent, however, obtained impaired scores on the Category Test. This suggests that important cognitive abilities are being affected. This area requires further consideration because physician attitudes about substance abuse vary. Shine and Demas[8] report on a survey of 90 randomly selected physicians and medical students in a large teaching hospital. The results of this survey indicated that over 40 percent did not consider drug abuse a disease. In another survey,[9] which was by way of self-report, medical students classified themselves as drug users to the following degrees:

| | Percent |
|---|---|
| Marijuana | 27.4 |
| Cocaine | 10.8 |
| Stimulus | 6.9 |
| Tranquilizers | 9.9 |

It may be that these future physicians will present an "at risk" category that will need much attention in future years. Medical education needs to include this information in the formative years of student doctors.

It cannot be overemphasized that evaluation of physicians to determine levels of cognitive competence is in no way a punitive exercise. It is extremely difficult for an examiner to witness certain cognitive deficits

within individuals who have worked so hard to obtain their medical degrees and then served so diligently for years assisting others in time of need. It is reasonable that denial is used by all in this process. It is not uncommon to test the limits as far as possible when evaluating physicians in an attempt to obtain the best performance. One has an obligation, however, to the physician and to patients to accurately report test results. The manner in which this takes place requires the greatest amount of gentleness and compassion.

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## Med-Chi Photo Contest Rules

### Eligibility

You must be a member of the Faculty or the Auxiliary of the Medical and Chirurgical Faculty to enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

### Contest Rules

1. Photographs may be submitted in two categories—BLACK and WHITE or COLOR.
2. Limit: three entries per person.
3. Entries must have name, address, and telephone number attached to the BACK of each photograph.
4. PRINTS only, no smaller than 8×10 or larger than 11×14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
5. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on April 13, 1988.
6. Entries MUST be matted or dry mounted. No framed photographs will be accepted.
7. Photographs entered in the contest will be on display at the Annual Meeting of April 1988.
8. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland, , April 27 through April 29, 1988.
9. Photographs will NOT be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual Meeting on Friday, April 29 or at the Faculty Building thereafter.
10. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.
11. Prizes will be awarded to the FIRST and SECOND place winners. Additional information about the prizes will be published in the Maryland Medical Journal.

# Whither the Impaired Physician? The Politics of Impairment

*EDWARD T. CARDEN MD*

**Any attempt to develop a global perspective on impaired physicians rapidly reveals not a "problem" requiring "solutions" but rather a dilemma desperately needing management. Analysis of the conflicting social, political, and medical issues surrounding this dilemma makes apparent only one overriding principle: The welfare of society and the welfare of the individual impaired physician are inseparable.**

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By establishing programs that are confidential and primarily therapeutic (and disciplinary only for "nonresponders") society benefits because the colleagues, family, and friends of the impaired physicians report them earlier in their impairment in order to obtain the effective intervention of such programs. Plenty of data on impairment proves that it is not amenable to detection by legislative fiat. All states with mandatory reporting laws have not experienced any increase in referrals to their medical board.

In general, the more threatening the forces applied to this dilemma, the more likely ordinary people are to cover for an impaired person. Perhaps it's as simple as America's traditional and healthy lack of trust in the power of bureaucracies. An example of this is the FAA's difficulties with impaired pilots, even with all its mandatory medical screening, until it (1) waved the automatic lifetime grounding of pilots that accompanied a diagnosis of alcoholism or other drug addiction and (2) enlisted a cooperative and confidential effort to detect and follow such pilots by the Airline Pilots Association.

## Background

The networking needed to deal effectively with the impaired physician appears to be the cutting edge of those somewhat paradoxical forces that shape the good of society by protecting the rights and dignity of the individual. As in all human endeavors, risk cannot be eliminated but can be managed to a tolerable minimum.

Many people in the political arena are unaware of that reality and are willing to create oversimplified initiatives based on fear, rather than on any understanding of this complex issue. An excellent example recently occurred in New Jersey, where a State Commission on Investigation issued a public report that discussed only 20 of the (then) 380 cases of the medical society's impaired physicians program. These cases were consciously misinterpreted and misrepresented to create a "public outcry" for mandatory reporting to the State Board. The report made a one-line reference to the national reputation of the New Jersey program and alluded to the excellent laboratory affiliations used for its monitoring activities, just enough positive commentary to obfuscate its design as a "hatchet job."

This experience shows a need for absolute confidentiality in our medical society programs. These projects must be protected from the exigencies of ambitious politicians. Each program needs a highly defined "Memorandum of Understanding" with its state board that will guarantee its confidentiality unless an independent investigation produces significant evidence of a pattern of malfeasance in the medical society program.

New Jersey was "audited" within the federal confidentiality laws, which allowed the Commission to report cases using numbers only. While the identity of these physicians was protected, no one could realistically step forward to pinpoint the gross misinterpretation and inaccuracy of the report.

Conceptually, an impaired physicians program is an employee assistance program (EAP) for physicians. The key ingredients to successful EAPs are:

- Active casualty surveillance (you don't wait for the primary victim to realize there is a problem)
- Intervention
- Referral for appropriate treatment
- Pervasive policy of advocacy (job security, promotion potential, and so on) provided the patient responds (within reasonable clinical limits) to intervention and treatment

There are two phases of the active casuality surveillance: **Case finding**—which is made possible by the program's image of effectiveness, advocacy, and confidentiality. **Monitoring**—most long-term studies on impairment, especially chemical impairment, show conclusively that routine sporadic follow-up, with biological fluids as necessary, is a very therapeutic process. It decreases both the incidence and the duration of recidivism, and recovering people view it that way, too. Done properly, it reinforces their recovery and is not a statement of mistrust except to those who are not recovering.

## Typology and Effectiveness

So far, four types of impaired physicians programs have evolved:

**Voluntary** While many of these programs have a "paper only" existence, several have attained a signifi-

cant level of *sustained* activity. Ohio is an example, dealing with approximately 25 new cases per year (out of 22,000 licenses).

**State Board Sponsored** The "Diversion" program, sponsored by the Board of Medical Quality Assurance of California, does not have a medical director but has been fully operational since April 1980. About two years later, the California Medical Association changed its originally supportive posture toward this program for many methodologic reasons. In 7.5 years, and after spending over four million dollars, they have dealt with 460 cases out of 65,000 licensees (practicing within the state) (see Table). This program was condemned as ineffective by two reports of the California Attorney General's office. In 1985 there were some personnel changes, but the overall penetration of the problems of the impaired physician by this program has not changed significantly. It should be noted that this program **is** confidential (the board gets only the *names* of those who have been judged to have failed the program). Thus, their difficulties are not just operational but are also "image-oriented" (that is, as a part of a regulatory process).

**Treatment Center Oriented** In 1975, the Medical Association of Georgia granted the Ridgeview Institute of Smyrna $63,000 annually to develop and conduct an impaired physicians program for the State of Georgia. In the first nine years, they treated approximately 1,500 physicians, *of whom 125 were reported from Georgia* (out of 8,500 Georgia licensees). However, two years later, a report from Georgia indicates that they have treated 297 Georgia physicians. There was no follow-up on physicians who did not respond to intervention (about 75), and there was no attempt to deal with untreatable impairments, such as senility. It is the Georgia program that originated the concepts that most chemically impaired physicians need 120 days of treatment, and that they should be treated only in environments where there are many other impaired physicians. Because of their orientation (from a treatment center), the remarkable changes in some of the data they supply, and the less-than-total documentation of some of their outcome claims, some experts believe they are subject to conflict of interest problems.

It should be noted that the Georgia program now recommends a full-time medical director and staff, paid entirely by medical society funds and grants, as the optimal model for dealing with impaired physicians.

**State Medical Society Sponsored** Some have a full-time medical director as well as other full-time personnel. States with full-time nonphysician directors include Maryland, Louisiana, Washington, and Virginia. The three original states with full-time medical directors have the following lessons to teach:

- **New York**—funded through the legislature that has given one $350,000 grant (of which $250,000 was spent) and a second grant of $450,000. The problem with this program is that there is no commitment from the medical society. For 1986, they refer to a $35,000 "in kind" money and a $12,500 treatment loan fund as their participation. Meanwhile, the director must hire a staff with only a year or less of guaranteed employment, which must be renewed annually through the legislative process, a politically volatile source of funds. They had 204 cases out of 54,000 licensees in the first 19 months. Their current staff, in addition to the medical director, consists of a full-time secretary and three very part-time regional medical directors, four program coordinators, and one administrative assistant.

- **Florida**—this program started in February 1985, with a $150,000 annual grant from the medical society, derived entirely from dues. This is the largest financial commitment from a state medical society so far developed in the United States. They

**Table. Comparison of State Programs**

| | California | New York | Florida | New Jersey |
|---|---|---|---|---|
| Licensed practicing physicians | 65,000 | 50,000 | 24,000 | 12,000 |
| Number of cases | 460 | 204 | 273 | 359 |
| Duration of project | 90 mos | 19 mos | 24 mos | 53 mos |
| Cost (aggregate) | $4,000,000 | $675,000 | $350,000 | $827,000 |
| Percent of physicians in program | 0.4 | 0.4 | 1.1 | 3.0 |
| Cost per case | $8,700 | $3,300 | $1,280 | $2,300 |
| Average monthly new caseload | 5.11 | 10.74 | 11.4 | 6.77 |
| Cases per month per 10,000 physicians | 0.79 | 2.15 | 4.74 | 5.64 |

have some "in kind" money from the malpractice company for rent and so on. Their staff consists of one full-time secretary and the medical director, who covers a state with 58,000 square miles. Since monitoring is therefore a huge problem, most physicians are treated for longer periods than other patients in order to enhance their prognosis. Their program had 273 cases out of 24,000 licensees in its first 24 months.

- **New Jersey**—the Medical Society of New Jersey hired America's first full-time medical director in September 1982. Their budget has grown from $154,000 to $285,000 in five years, with the two captive malpractice insurance companies consistently and equally contributing 2/3 of each budget. They started with two and now employ four full-time people. Serendipitously, about 80 percent of the population of New Jersey resides within an hour or so of the medical society headquarters, making the state very easy to "cover," and requiring only about 6 percent of their clients to receive more than the usual 4 to 6 weeks of inpatient treatment. It is also the only program that has been adequately staffed from its inception.

  In five years they have had over 400 cases out of 12,000 licensees practicing in the state. This means that over 3 percent of all the physicians in New Jersey have been identified as impaired. Two-thirds of this sample have chemical impairment. Assuming physicians do not vary from the general population in the *incidence* of chemical impairment (15 to 20 percent or so according to the latest NIMH catchment area studies on disease prevalence) but only in the choice of chemicals (narcotics as opposed to alcohol), New Jersey has in five years reached only 15 percent of its theoretical target. No other segment of our society has achieved that level of success (including the Airlines Pilots Association whose program has been operational since 1971), but there is still much to be done.

## Funding Methods

The major impediment to the development of programs for impaired physicians is funding. Medical service organizations must anticipate a drop in their membership with significant dues increases. Most state societies would need a 10 to 20 percent increase to adequately staff an impaired physicians program.

Alternative sources can be found but generally require a persistent, well-planned strategy to demonstrate a "mutuality of interest." This is absolutely necessary to offset the usual image of physicians as well-paid professionals who shouldn't need outside support. It is unquestionably mutual interest, not charity, that will generate funds from outside sources.

This is a compendium of sources uncovered by various programs:

**Medical Societies** While medical societies cannot usually underwrite a total program, alternative sources will be very interested in realistic "good faith" support before they consider a contribution. That degree of support can be achieved *only* if the administrative and political leadership of the organization are personally convinced of the value of an adequately funded and staffed program.

This occasionally is difficult to achieve, because many human beings have had personal experiences with impairment, especially chemical impairment, that have been very frustrating or even disastrous, and they may not be open minded about the potential effectiveness of a program. Impairment by a key personnel also will impede basic political action. When these attitudes engulf your medical society's leadership, your efforts will be patronized (but not supported), and there is not much likelihood of success without a ground swell of activity from the general membership. This sometimes can be spearheaded by one large or several smaller county societies. County societies also can offer other support such as space, office personnel, or a monetary contribution to help a program get started or even form a joint venture with a state society, as happened with the Denver and Colorado medical societies.

Another major impediment to the development of an optimal program could be concern by a medical society "exec" that employment of a physician by the medical society could undermine the exec's status. Experience has shown, however, that these medical directors have much too large a task to become involved in medical society politics.

**State Medical Boards** As mentioned, the FAA experience with pilots and the Diversion Program of the California Board of Medical Quality Assurance demonstrate that people are not inclined to turn to a regulatory agency to solve problems of impairment, especially early impairment. Some state boards recognize that fact and have offered funding for the medical societies. New York is the prime example, having received one $350,000 grant and $450,000 grant. Ohio has excluded the Medical Society Program from its mandatory reporting law, but unfortunately its program is still voluntary.

State boards can be offered the following assurances that our programs are effective:

- A statistical report of the number and types of cases, their final disposition, and results of continuous monitoring, and so on.
- The opportunity to evaluate the medical societies "timeliness" in turning cases over to the board that did not respond to intervention and/or treatment and that were in some way dangerous to the public or themselves.
- The failure to find the medical societies involvement in cases reported to the board by other sources or effective involvement if it was there (that is, no one who was a real danger was left in practice).

  It should be noted that it is legally impossible for some state boards to fund a medical society program, and it is politically impossible in others because of the misguided forces of consumerism. The State Board of Florida, for example, originally volunteered a "matching" $150,000 grant but had to withdraw this offer in the final stages of a written agreement because of political consequences.

**Malpractice Insurance Carriers** No study has been done to demonstrate a higher malpractice incidence among impaired physicians. The people who monitor malpractice usually don't know how to detect impairment, and therefore it is not identified as a factor. However, one does not need to stretch his/her clinical imagination to realize that a higher incidence and severity of malpractice is inevitable among impaired physicians.

The New Jersey Program eventually will have enough data to do a statistically valid study. The problem is interconnecting both data bases without loss of confidentiality. A preliminary study suggests much higher awards for cases involving impaired physicians, and a State Commission found that 5 out of 32 physicians with more than 6 malpractice suits were in the impaired physicians program (although there were no misdeeds detected *after* their enrollment in this program). A definitive study can be obtained only after there is a sufficient sample of impaired physicians in each specialty to compare with national and state averages. This will take time.

In the meantime, grants to Impaired Physicians Programs can be developed under the "Research and Development" concept, with the expectation that data eventually will support a "loss-prevention" basis for the grant. *If each malpractice carrier contributed annually to each state medical society their average cost of just one case, the funding problem would be virtually solved.*

**Health Insurance Carriers** No health insurance carrier, to my knowledge, has contributed anything to an impaired physicians program, although many have supported specific treatment programs for their own personnel and patients. The reason is that support for impaired physicians would require similar support for other health professionals. As one company spokesman said, "Where would it end? Hospital architects? Radioactive waste disposal teams?? Where???"

The second reason is that many carriers believe their Utilization Review Process will accomplish the same objective, from their standpoint, as would an impaired physician program. This reflects the carriers inexperience with the nature of many impairments, especially the earlier and middle stages, but it is difficult to argue with inexperience.

**Other Health Professional Associations** This was the focus of the seventh and eighth National Conference on Impaired Physicians. In general, these associations have identical problems in generating sufficient funds to do something about their impaired people. Their full participation is an absolute necessity in sparsely populated states, however. Without them, there will never be the "critical mass" necessary to have effective networking and other assistance.

In other states, these associations offer a potential market for a successful program to enlarge itself and to increase the efficiency of its personnel by condensing the geographical aspects of their activities. New Jersey and Florida are embarking in this area right now.

It also should be noted that auxiliaries sometimes can play a very special role in "consciousness raising."

**Clients** Oregon is the only state so far to charge a fee to clients of its program. Despite a sliding scale, virtually all clients either could afford nothing or else the $200 per month maximum was no major problem. The fee is collected for two years, no matter what type of services are received from the program. Thus, earlier-stage impaired physicians and dentists are subsidizing the later-stage victims, who frequently cannot afford the fee and generally require more advocacy and monitoring services with the board, hospital staff, and the like. It should be noted that an $85,000 deficit (so far) in Oregon has been picked up by the medical society, so at best, client fees can be only a partial source of funding.

**Hospitals** "Mutuality of interest" can be established in several ways with hospitals:

- **Malpractice Carriers** New Jersey receives $45,000 annually from the Hospital Associations' two (captive) malpractice carriers (for a total of $90,000 out of $285,000 budget).

- **Hospital Associations** They likely will have the same perspective as health insurance carriers and so far have not been a source of funds. However, Hospital Associations can be tremendous political allies in any endeavor for impaired physicians.
- **Hospital Staffs and Administration** In Arizona, St. Joseph's Medical Center has pledged a $50,000 grant, $25,000 from Medical Staff contributions and $25,000 from the hospital itself. St. Luke's in that state has contributed half its medical director's time to get the state program started. This is an example of "local" enlightenment trying to raise the consciousness of a larger community to get a program off and running.
- **Addiction Treatment Centers** The Georgia and Mississippi Programs have been integrally tied to treatment centers since their inception, and the centers have donated most of the man-hours necessary to run the program in exchange for the increased flow of patients to their center. This approach is feasible when there is a total void of activity. However, as previously implied, everyone becomes subject to (*not guilty of*) continuous allegations of conflict of interest. The allegations come not only from competing centers who feel left out but also from clinicians who may not agree that 120 days of treatment is needed as often as it is used at these centers. For this and other reasons (such as a desire to start to include untreatable impairments like senility in their program), Georgia now wants to fund a medical director but because of financial stress has to decrease its annual contribution from $63,000 to $50,000.

**Pharmaceutical Companies** The New Jersey program has received some one-time contributions for their treatment loan fund from several pharmaceutical companies. These companies are more likely to fund a program for impaired pharmacists than for impaired physicians.

### Conclusion

The response of organized medicine to impaired colleagues is accelerating but is still very inadequate in many states. To the extent that our service organizations do not address the problem more vehemently, the void will be filled by a state bureaucratic process that inevitably will be less effective and more expensive, with that cost obtained through increased licensure fees. An article in this issue by Lon Connor (page 213) will give a more comprehensive summary and consensus of our national experience.

Health is not simply a lack of disease but includes an ability to heal the inevitable negative forces encountered during life. A healthy society is no different from a healthy individual. We must create a network for healing all kinds of problems if we are to maintain human progress. It is only when everyone realizes the stake we have in each other that our culture becomes free from impairment.

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Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

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# Comparison of Impaired Physician Programs Nationwide

*S. LON CONNER*

**Physician impairment from alcoholism and drug addiction was first addressed on a national level by the AMA at its first symposium held in San Francisco in 1975, attended by concerned physicians from all over the United States. In 1975 there were only five states with an operational impaired physicians program; all were operating on a strictly volunteer basis. Today, 13 years later, every state in the nation has an impaired physicians program of some sort.**

Conner is the Executive Director of the Medical Association of the State of Alabama.

As the only nonphysician member of the AMA's Impaired Physicians Advisory Committee, I have taken it as my lot to attempt to analyze why some programs seem to take off and others never get off the ground. For the past two years, I have surveyed all 50 states in an attempt to gather factual data for this analysis for presentation at the AMA's impaired physicians meeting. The data are indeed revealing.

Every state has an impaired physicians program, ranging all the way from a highly structured program with a full-time medical director assisted by seven staff members to some apparently more conceptual than operational.

## Medical Director

Nineteen of these programs have medical directors, nine being full-time. Ten have part-time medical directors, and 11 more states have plans for or are considering hiring a medical director. At this time last year, only five states had full-time medical directors and five more had part-time medical directors.

This is not to suggest that you cannot have a good program without a medical director, because you can. But of all the programs without medical directors, about 60 percent are staffed by a person whose prime responsibility is another job.

Of those without medical directors, 59 percent report that the impaired physicians program is not even a line item on their budgets. And we wonder why their programs do not work? Programs with medical directors have better financial support from their associations than those with lay directors.

As an association executive, I don't believe in throwing money at a problem, but in the case of impaired physicians programs, the statistics are quite clear. States that have medical directors have a higher percentage of interventions than those that do not. Of the states with more than 50 interventions last year, all but two had medical directors.

Certainly I can go to a county medical society to speak about the Impaired Physicians Program (I speak to these societies all the time), but neither I nor any of my staff have the same credibility that a physician has in trying to promote this program. When you look doctors in the eye and tell them you want to help them and you want them to put their future medical career in your hands, they need to know not only that you are sincere but also that you have the expertise to help them.

This is also true when you ask a physician to report a colleague whom he or she knows is in need of help. A well-trained medical director can give credibility to a program that a lay person cannot. And I don't mean you can accomplish this by hiring a retired doctor just because he has worked hard in the arena of organized medicine. You need a physician who believes in your program, who can sell it, inspire confidence, and motivate people to work.

## Staff

Quite often the staff person assigned to work with the impaired physicians program is the person with the least to do and very likely with no training or interest in impairment. If this is the only staff working on the program and the remainder are volunteer physicians, unless your program is the exception, you will achieve only minimal success.

Many programs have attempted to salve their consciences by installing hotlines that will enable those in need of help or those who want to report a case to have a readily accessible way to accomplish this. I'm not opposed to this, but if this is the major part of your effort, your results will be very limited.

## Funding

Funding for these programs varies as much as does the staffing. Some states report they have no expenses except printing an occasional brochure, while one state had an annual program budget of $563,000.

One state reported their impaired physicians program accounted for 11.7 percent of their total budget. Just as you would expect, the states that expend a lot of money (or a larger percentage of their budgets on their programs) get good results. I think the old sayings "Put your money where your mouth is" and "You get what you pay for" hold true in this respect.

You may well ask, "Why don't state medical associations adequately fund their programs?" It appears that most physicians either really don't believe that addiction is a treatable disease or they don't care enough to want to get involved. Either of these diagnoses is a terrible indictment. But bring it one step closer to home:

How many of you know a member of your county medical society or hospital medical staff who has an addiction problem but you have failed to talk to him about it, report him to the impaired physicians program, or bring it up during the hospital credentialing process?

This same attitude permeates the leadership of many state medical associations. Which of you, when playing golf, would find one of your colleagues on the eighteenth hole with a broken leg and would leave him lying there? None of you. But you go into the clubhouse and see one of your colleagues with a glaze over his eyes, obviously in a drunken stupor, as he is most days by this time. And you speak, pat him on the shoulder, and go right on by. The man you would have helped with the broken leg was in far less danger than the one you left at the bar. This attitude on the part of physicians needs to be changed.

There are many ways to fund impaired physicians programs. Many states use combinations of dues, foundations, donations, contracts with liability carriers, licensing boards, special assessments and so forth. No one way is better than another, but a truly viable program needs to be adequately funded.

### Political Support

Executive directors have a lot to do with what gets funded in the state and they support programs that their presidents, chairmen of the board, or board members support. If you can't get the attention of the decision makers (the ones who approve the budget), it is going to be hard to get the necessary funds budgeted.

How many board members of your state association have been to county medical society meetings to speak in support of the impaired physicians program? The support of your elected leadership must be developed if you expect your program to succeed.

The need for a strong program in each state is evident. A significant number of physicians have a definite drug and alcohol impairment problem. It is going to get worse if we don't take decisive action. I am very pleased with the increased funding in many state programs since last year and with the increased number of programs with a medical director. But there are still states not adequately addressing this problem, not responding to the challenge.

One thing is sure: if organized medicine does not take a leadership role in this effort, someone else will: the licensing boards, plaintiff attorneys, or the state legislatures. Their impetus definitely will be punitive rather than treatment oriented. We still have time to take aggressive action to control these programs, but unless we move rapidly, we surely are going to miss the opportunity.

Following are some fairly representative examples of specific experiences in various states. Naturally, I have generalized them to protect identities:

- In many states, physicians have backed off from intervention because of the threat of lawsuit by a targeted impaired physician. There appears little real risk. Such lawsuits are rarely carried out for the obvious reason that an addicted physician fears, most of all, the kind of documented public exposure that would accompany an actual trial. While the risk does exist, it is risk of very low order.
- In one state, physicians knew of the impairment of a young physician but did nothing effective to help him until he was called before the licensing authorities and disciplined for abuse of his controlled substances license. He killed himself a short time later.
- There are many examples of reluctance to report or testify against an impaired physician notorious for his intimidating hostility, filthy mouth, and general orneriness. Everyone is afraid of him. Best strategy here might be one based on the safety of numbers: several confronters might feel bolder than one or two.
- Intramural competition is not always good. In some states, it has been reported that execs of the licensing authority or medical examiners try to get impaired physicians up on disciplinary charges before they can be reached by the impaired physicians program. There is considerable national pressure to increase the number of sanctions, and the same targets of the impaired physicians programs would be fine scalps for the statistics game. Obviously, had the impaired physician program been truly effective, intervention would have occurred before disciplinary action became necessary.
- Only slightly more than a third of the states responding to my survey have some type of state law formally recognizing the impaired physician program through some type of funding mechanism. There may be a reluctance on the part of state societies to seek legislative support. Some doctors still prefer the ostrich approach to the problem: denying, at least to the public, that there is a problem. Just as denial is one of the key markers of impairment, so is group denial fairly characteristic of state societies that don't want to face the impaired physician problem in any manner other than tokenism.
- There appears to be little correlation between the number of impaired physicians in a state and that state's response to the problem. Higher funding does not mean more impaired physicians; conversely, token funding is not an index of a low impairment index. All that can be said of any attempt to correlate funding with the problem is that in those states where funding and other support is high, one or more medical leaders took the bull by the horns and showed the way with conviction and dedication.

• Some programs have contracted with recovering impaired physicians by offering to represent them before medical examiners, liability underwriters, disciplinary boards, and others. Such a warranty goes far to build faith in the program and to undergird the recovering physician.

This kind of support and trust contributes greatly to a recovering physician's determination not to break faith with those who went to the mat for him or her.

• Physician programs in some states have brought in other professional groups to share the costs and to share in development of effective programs. Impairment is no respecter of persons, specialties, or professions. An alcoholic physician and an alcoholic dentist or lawyer are brothers (or sisters) under the skin, whatever else they may have in common.

• Where they have been tried, special assessments tend to have the same one-shot effect on programs as the assessment itself. Effective programs must be entered into for the long haul. Quick fixes are worse than useless.

The importance of full-time medical directors is underscored in many aspects of state programs. Only a full-time medical director can effectively follow up on cases, many experts in the field say. He or she can check on recovering physicians in a professional yet friendly manner to determine whether the subject's resolve is still strong and whether the outlook has changed. If it has, the medical director can detect this much better than a lay person, being attuned to clues in voice or behavior. A full-time medical director does not, of course, preclude volunteers, who always are sorely needed.

Contracts with licensing boards have had a checkered history for impaired physician programs. The boards are too often interested in numbers, thus to demonstrate the intensity of the "campaign" to the public. There even have been demands to go public with actual people involved, with obvious consequences. Most of these contracts have been on year-to-year basis and thus have a tendency to become performance-driven for reasons of accountability. Moral: impaired physician programs should be as nearly independent and free-standing as possible under a state's particular circumstances.

## Summary

The evidence is becoming increasingly clear on several points: impaired physician programs should be as independent as possible from other medical society programs and concerns. A full-time medical director, ideally, should have something very close to evangelical zeal in the calling to this work. There is a small risk in excessive zeal, of course, but this has not yet appeared to be a significant problem.

The medical director model must, of course, be augmented by staff and volunteers to handle the legwork and all the thousand and one things that go into the smooth functioning of any enterprise. Staffers may, at first, feel they are being shipped to Siberia if they are asked to help out in the impaired physician program.

It is important there be some screening for the assignment. A good lobbyist in the legislature or even a fine general counsel might be miscast helping doctors to rebuild their lives. Compassion is a must. Family acquaintance with an addictive problem certainly would be a plus.

But above all, a staff assistant in any capacity must appreciate the full meaning of the famous quotation from John Bradford, the sixteenth century Protestant martyr. When he witnessed a group of prisoners being led off to execution, Bradford (Chaplain to King Edward VI) said for the ages: "But for the Grace of God there goes John Bradford."

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# The Impaired Physician Movement

*G. DOUGLAS TALBOTT MD*

**A medical society's impaired physicians program can assure the state's citizens that physicians will not practice medicine until they are in recovery (and thus provide good quality control of medicine in that state), but it will not deal with the sick doctor in a punitive fashion.**

Dr. Talbott is Program Director, Medical Association of Georgia, Impaired Physicians Program.

Looking back two decades, we see three individuals who were primary forces in the growth and development of the impaired physicians movement. Emmanual Steindler, the Director of Mental Health for the American Medical Association; LeClaire Bissell, working in the New York State Program; and Luke Reed, Secretary of the International Doctors in Alcoholics Anonymous, played critical roles in stimulating this effort.

The First National Conference was held in San Francisco in 1975 at the St. Francis Drake Hotel, and these individuals along with a small cadre of interested physicians stimulated the movement into rapid growth. Evidence of this was the Eighth National Meeting in Chicago this year with about 550 participants. In the past 13 years there have been additional leaders, too numerous to mention, who have contributed to the development of the Impaired Physicians Program.

The name for the program has undergone a series of transformations. At first commonly known as the Disabled Doctors Program, this title was changed in the mid-1970s to the Impaired Physicians Program. Under the able leadership of Donald Keith MD, the AMA's Impaired Physicians Committee has continued to examine alternative nomenclature. Well-Being and Rehabilitation Committees have been other programs' names. The Georgia program, along with the New Jersey program, settled on the title Physicians Assistance Program (PAP), which is compatible with Employee Assistance Programs (EAP). The word impaired was discarded by these two state programs for legal reasons. The legal opinion was that if a patient was seen by an impaired physician, although this physician had been in recovery for ten years, the physician was obligated to inform the patient that he or she was impaired and to allow the patient to receive a second opinion.

## State Leadership

Looking back at the leadership over the past two decades of the individual state programs, one sees most programs were initiated by physicians who were in the recovery phase of their disease. These recovered physicians were aided most effectively by nonrecovered physicians in positions of authority in the state medical association hierarchy. This was true of Georgia where Drs. Ernest Atkins, Cullen Richardson, and the Council and the Presidents of the State Medical Society vigorously supported the Impaired Physicians Program. Such was true of many of the southern states. However, some states like New Jersey turned to a full-time nonrecovered medical director who was very knowledgeable about chemical dependency. Some states like California, directed their programs through liaison with the medical licensing boards. However, the majority of states found the leadership by the state medical society was most effective. Again, the fluid aspects of the movement to date are addressed by the varied state models of leadership that still exist for the impaired physicians movement.

Organizationally, the state medical programs vary from paper programs, which are only nominally effective, to highly organized programs with excellent results. David Canavan MD, with very able help from Edward Redding MDiv, has established a model program in New Jersey. Fiscally effective, organizationally sound, with excellent leadership, New Jersey's program has established a superb patient recovery record augmented by excellent case record documentation. Paramount has been the leadership of a full-time medical director who had no professional ties with any treatment modality. Many states such as Florida, New York, Tennessee, and Pennsylvania have followed suit. Georgia is in the process of simulating the New Jersey model as are some other states.

Most states started with volunteer leadership, but this has presented two difficulties. First, many volunteers are involved either experientially or professionally with treatment facilities. Although conflict of interest is neither intended nor an actuality, in most cases it is perceived as such. Second, most state programs quickly outgrow volunteer effort, and without full-time employees, the program begins to flounder. Maryland has developed a cost-effective alternative combining a full-time master's level addictions specialist with a volunteer medical director. In some states the licensing boards provide leadership along with the executive directors. Medical society committees are often adjuncts and are ineffective as such. These programs tend to become punitive rather than advocatory in nature.

Licensing boards are responsible for disciplining immoral or incompetent physicians. The state board usually welcomes the development of an impaired physician program sponsored by their own medical societies.

Despite the urging of AMA's Department of Substance Abuse and other state program examples, some states continue to have ineffective token programs.

Usually this is because of uninformed or uninvolved medical society leadership.

### Funding Problems

Funding is a constant problem, yet in many ways it shouldn't be. It is established that a minimum of 13 to 15 percent of physicians in any given state did, have, or will have the disease of chemical dependency, and an additional 5 percent will incur psychiatric illness. These are major problems in our fellow physicians, and we must provide for their welfare before the legal, judicial, or legislative systems take action. Medical societies successful in providing budgets have done so by various methods such as raising licensure fees, obtaining monies from malpractice insurance companies, assessing the individual practitioners, or soliciting grants from the state, private foundations, and commercial companies. Underfunding, or collapse of funding inevitably will determine the demise of these programs, as has happened in a few states.

A basic problem in the impaired physicians program is that the rank and file of the medical society is still ambivalent toward their alcoholic and drug-addicted physician members. Undoubtedly their attitude is contributed to by the ignorance of these disorders as a primary, psychosocial, biogenetic disease. In some instances physicians' peers continue to see their impaired fellow physicians as bad, immoral, weak, or unethical instead of truly sick. This affects the funding efforts.

Major areas that must be addressed vigorously by state medical societies are:

1. The need for full-time directors who have no ties to therapeutic facilities, either inpatient or outpatient.
2. Leadership by state medical societies is critical rather than leadership resting in licensing boards, health boards, or legislative or judicial departments.
3. Funding continues to be a major problem seemingly best addressed by raising the licensing fees, although efforts should continue to receive monies from insurance companies and the private sector.
4. Family therapy needs to be included in a much more vigorous way, not only in identification, intervention, and treatment but also in the prevention of this disease.
5. Data collection is still scarce and not sophisticated. The Pilot Impaired Physician Epidemiological Surveillance Study (PIPESS) appears to be a good initial effort in this direction and should include all the states with impaired physicians programs.
6. Other impaired health professionals programs (nurses, pharmacists, and dentists) should be incorporated into the impaired physicians programs along with more vigorous efforts to include medical students and resident training staff.
7. The media should be reeducated that chemical dependency is a disease and not a moral problem. Addicted physicians require appropriate treatment not disciplinary measures.

Currently the Impaired Physicians Programs (or the Physicians Assistance Programs as they should be called) are growing. Their need and destiny are clear. Their course will be troubled but successful if the dedication and enthusiasm demonstrated by so many for so long with so few in this field continues.

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Manuscripts may be sent to Editor *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by the editor, editorial board members, and guest reviewers. The final decision is reserved for the Editor.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with margins of at least one inch. Number pages consecutively. Please submit two additional copies.

Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the reviewing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to *Index Medicus*, volume number, first and last page numbers, and year of publication. For more extenisve information about preparing medical articles for publication, the editors suggest the International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

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## State Medical Journal Survey

State medical society journals surveyed last spring were very well read, according to Health Industries Research of Wilton, CT. The firm surveyed readership of nine selected state medical journals from the thirty-member State Journal Group and two independent journals. The research company used its own FOCUS technique, measuring what physicians read and how they read.

Journals tested were those of Georgia, Kansas, Kentucky, Louisiana, Maryland, Michigan, New Jersey, Pennsylvania, South Dakota, Texas, and West Virginia.

"State journals studied here are—without exception—very well read," reports the executive summary of the firm's report. Some significant findings of the study compared with Maryland's responses show:

| | Average | *MMJ* |
|---|---|---|
| Issue readership | 69–88% | 76% |
| Ad exposure | 31–53% | 40% |
| Continue to receive | 87–96% | 94% |
| Reading time | 31 min | 31 min |

Nearly all physicians surveyed read at least one of every four issues, and in Maryland 54 percent of the respondents read four out of four issues; 18 percent read three of each four.

*Sample: MMJ* provided a random sample based on an nth name selection from our circulation list. Specialty and age data were defined through responses to the survey. Of the 200 surveys mailed, one was undeliverable; 137 completed questionnaires meant there was a 68.8 percent response.

*The FOCUS: Technique* FOCUS measures what physicians read and how they read. The technique is based on the realization that some physicians are, by nature, more thorough readers than others and that all physicians read some specific journals more thoroughly than others. Physician reading patterns are studied by medical journal advertisers, and advertising dollars are spent on journals that consistently demonstrate the highest level of physician readership.

Research into physician reading habits led to the development of a vocabulary for describing the thoroughness with which individual doctors read. These are the four reading patterns:

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*Read/look*: A very valuable reader who reads articles of interest and looks through remaining pages.

*Skim*: A highly selective reader of much less value to the advertiser with ad exposure based on chance.

*Table of contents to articles*: Also a highly selective reader with ad exposure dependent upon the location of the ad.

*MMJ* readers' patterns, by age groups are

| | Total | Under 45 | 45–65 | Over 65 |
|---|---|---|---|---|
| Cover to cover | 4% | | 5% | 27% |
| Read/look | 51% | 40% | 59% | 55% |
| Skim pages | 21% | 29% | 17% | — |
| T of C to article | 24% | 31% | 19% | 18% |
| Avg issue readers | 76% | 71% | 79% | 82% |
| Avg issue ad exposure | 40% | 31% | 45% | 55% |

Of the survey respondents, 94 percent want to continue to receive *MMJ*; this is how it looks by age groups.

| under 45 | 45–65 | over 65 |
|---|---|---|
| 89% | 96% | 100% |

The Managing Editor and all members of the Editorial Board are always receptive and desirous of comments from *MMJ* readers. Let us know what you think and how we can do a better job.



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**ad·dict** \ ə-′dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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# Discipline Commission Action

**In the Matter of**
**Nicholas M. Azzato MD**
**Before the**
**Commission on Medical Discipline**

### Order for Emergency Suspension of License

Based on information provided to the Commission on Medical Discipline (the "Commission"), the Commission makes the following Findings of Facts, Conclusions of Law, and Order.

### Findings of Fact

1. Respondent is a physician licensed to practice medicine in the State of Maryland.
2. On or about November 19, 1987, in the Circuit Court of Montgomery County, you entered pleas of guilty to two felony counts of distribution of a controlled dangerous substance in violation of Article 27, §286 of the Code.
3. Sentencing in this matter is scheduled for January 26, 1988.
4. On March 29, 1987 you obtained valium after presenting to a pharmacist a prescription for valium for patient A that you knew was not for the treatment of the patient. You ultimately dispensed the valium to others, but not to patient A.
5. In a police report received by the Division of Drug Control on June 8, 1987, Officer M. Trouther of the Montgomery County Police Department stated that on April 21, 1987 you admitted your drug dependency to the officer.
6. Based on the foregoing findings, the Commission finds that there is reasonable cause to believe that Respondent:

Fraudulently or deceptively uses a license. Section 14-504(2) of the Act.

Is guilty of immoral conduct in the practice of medicine. Section 14-504(3) of the Act.

Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction set aside. Section 14-504(6) of the Act.

Is addicted to or habitually uses any narcotic or controlled dangerous substance as defined in Article 27 of the Code. Section 14-504(9) of the Act.

### Conclusion of Law

The Commission concludes that for reasons set forth in the foregoing paragraphs, emergency action is imperatively required in this case under State Government Article, §10-405(b), Annotated Code of Maryland (the Administrative Procedure Act), because, in light of the

*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*


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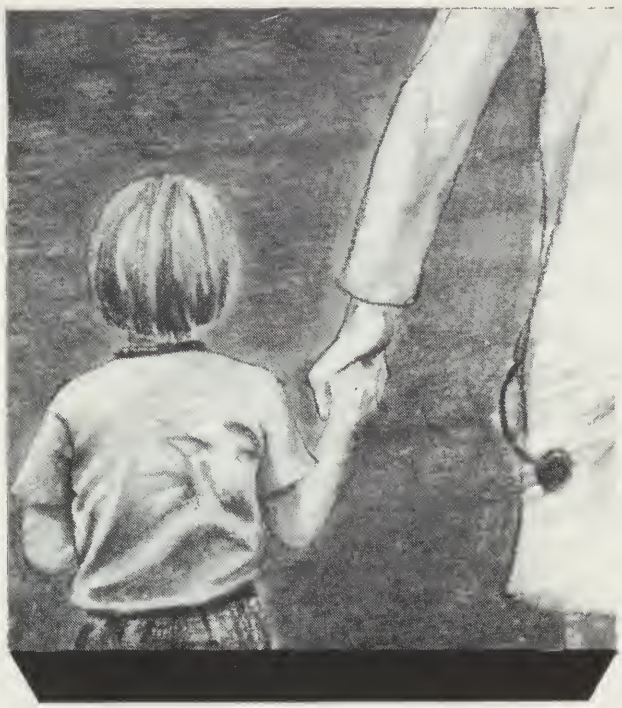
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foregoing, Respondent's continued possession of a license to practice medicine poses an imminent and grave danger to public health, welfare, and safety.

### Order

It is this 21st day of December 1987 by the Commission on Medical Discipline of Maryland:

ORDERED that pursuant to the authority vested in the Commission by State Government Article, §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine is hereby SUMMARILY SUSPENDED; and it is further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission:

1. His complete license to practice medicine in the State of Maryland, and
2. All permits issued to him to prescribe controlled dangerous substances, and it is further

ORDERED that a hearing shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a request from the Respondent for a hearing to consider this emergency suspension.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

• • •

## In the Matter of George C. Daniel MD Before the Commission on Medical Discipline

### Order for Summary Suspension of Medical License

Based on information received from the United States Attorney's Office and the Medical and Chirurgical Faculty regarding the medical practice of George C. Daniel MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

### Findings of Fact

Based on all the information known and available to it, the Commission has reason to believe that:

1. Respondent is a licensed physician in Maryland and by virtue of his license is authorized to practice medicine and prescribe controlled dangerous substances in Maryland.
2. Respondent sold prescriptions to individuals whom he never treated as patients for dilaudid, percodan, and demerol.
3. Respondent sold prescriptions to individuals whom he had never treated as patients and whom he did not know for dilaudid, percodan and demerol.
4. Prior to writing the prescriptions, Respondent did neither ascertain whether there was a legitimate medi-

cal purpose for prescribing the medications nor perform a physical examination or knew of a physical examination which had been performed justifying the writing of these prescriptions.

5. Respondent wrote these prescriptions on September 15, September 25, and October 8, 1987.

6. Based on the above Findings of Fact, the Commission has reason to believe that Respondent has fradulently or deceptively used a license, is guilty of immoral conduct in the practice of medicine, and grossly and willfully overcharges for professional services, §§14-504(2), (3) and (20) of the Act, and could, after notice and an opportunity for a hearing, be reprimanded, placed on probation, or have his medical license suspended or revoked as more fully set forth in the charge letter attached hereto.

7. Writing prescriptions for Schedule II drugs, such as dilaudid, percodan, and demerol, for an individual without any history or physical examination by health professional justifying same poses a risk to the health, safety, and welfare of that individual.

8. Writing prescriptions for dilaudid, percodan, and demerol without a legitimate medical reason poses not only a risk to the health, safety, and welfare of the individual for whom the prescription is written, but also poses a risk to the society at large.

9. Respondent was arrested and indicted as a result of the above referenced acts, *United States of America v. George D. Daniel MD*, Criminal No. 87-0509, United States District Court for the District of Maryland. A trial on the charges is scheduled for February 2, 1988.

10. Respondent is being held in the Baltimore City Jail, Baltimore, Maryland without bail until the trial.

11. Although Respondent is incarcerated, Respondent can make telephone calls and could telephone in prescriptions under his still valid Drug Enforcement Administration (DEA) and Maryland Division of Drug Control registration.

12. Although Respondent is incarcerated, Respondent can receive visitors who could bring in prescription pads enabling Respondent to write prescriptions for drugs without a valid medical purpose.

13. Although Respondent is incarcerated, he can legally still practice medicine and recommend treatment.

14. Although the US Assistant Attorney General has assured the Commission that he will inform the Commission immediately if the Respondent is released from the Baltimore City Jail, it is possible for Respondent to be released prior to the Commission being notified.

15. If Respondent is released from jail without emergency action, Respondent could practice medicine and write prescriptions.

16. Respondent's retention of a Maryland license to practice medicine and his ability to prescribe poses a grave risk and imminent danger to the health, safety, and welfare of the citizens of Maryland.

**Conclusion of Law**

Based on the foregoing facts, the Commission finds

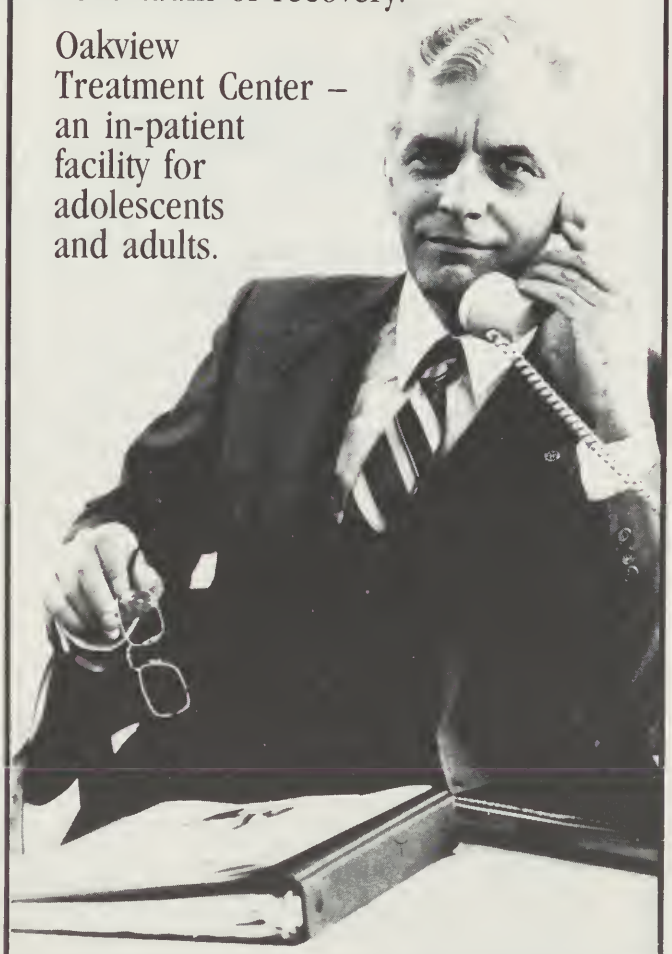

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that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b) Annotated Code of Maryland.

### Order

It is this 15th day of DECEMBER 1987 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver or have delivered to the Commission's Executive Director: (1) his original license from the Board of Medical Examiners (License Number D 31838); (2) his renewal card for his license to practice medicine from the Board of Medical Examiners; (3) his federal controlled dangerous substance registration certificate; (4) his Maryland State Division of Drug Control, controlled dangeorus substances registration, and (5) any prescription pads on which are imprinted his name or registration number; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date on which the Commission receives a written request for such a hearing from the Respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

• • •

## In the Matter of Charles Clement Lucas MD Before the Commission on Medical Discipline

### Findings of Fact, Conclusions of Law, and Order

Based on information coming to its attention, the Commission on Medical Discipline of Maryland ("the Commission") determined to charge Charles Clement Lucas MD ("The Respondent") with violating two provisions of §14-504 of Title 14 of the Health Occupations Article, *Annotated Code of Maryland*, the Maryland Medical Practice Act ("the Act"). The specific charge alleges violation of §14-504(6) and (22) of the Act which provides:

> Subject to the hearing provisions of this subtitle, the Commission . . . may . . . reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceding is pending to have the conviction or plea set aside. Section 14-504(6) of the Act.
>
> Is disciplined by a licensing or disciplinary authority or con-

victed or disciplined by a court of any state or country for an act that would be grounds for disciplinary action under this section. Section 14-504(22) of the Act.

Respondent was properly notified of the charges and allegations by letter dated November 17, 1987. A hearing was scheduled for December 29, 1987. A prehearing conference was held on December 3, 1987. Present at that prehearing conference were Charles Clement Lucas MD, Respondent; Rose Mary Hatem Bonsack MD, Representative of the Commission; and Robert L. Roth, Esquire, Administrative Prosecutor. As a result of discussions and negotiations both at and following the prehearing conference, Respondent has agreed to enter into the following Consent Order.

### Findings of Fact

The Commission finds that:

1. At all times pertinent to the charges, Respondent was a physician, licensed to practice medicine in Maryland and subject to the jurisdiction of the Commission.
2. On or about April 7, 1982, in the Superior Court Division of the General Court of Justice of the State of North Carolina, you were convicted upon your plea of guilty to five counts of solicitation in violation of North Carolina General Statute §14-3.
3. As a result of the conviction on June 23, 1986, Gordon M. Ambach, Commissioner of Education of the State of New York, issued an order suspending your license to practice medicine in New York for two years, staying the suspension and placing you on probation for two years.

### Conclusion of Law

The Commission, by unanimous vote of those members considering this matter, concludes as a matter of law that Respondent is GUILTY of violating §14-504(6) and (22) of the Act.

### Order

Based on the foregoing Findings of Fact and Conclusion of Law it is this 15th day of December 1987, by a unanimous vote of the quorum of those members of the Commission on Medical Discipline of Maryland considering this case:

ORDERED that Respondent, Charles Clement Lucas MD an individual licensed to practice medicine in Maryland is hereby REPRIMANDED for the above violations of the Act.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

### Consent

By this Consent, I agree to accept and submit to this Order. I admit the Findings of Fact and Conclusions of Law preceeding the Order. I acknowledge the validity of the Order as if made after a hearing at which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law. I also recognized that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I waive all such rights. I sign this Consent after consulting with my attorney and without reservation, and I fully understand its meaning.

***CHARLES CLEMENT LUCAS*** **MD**


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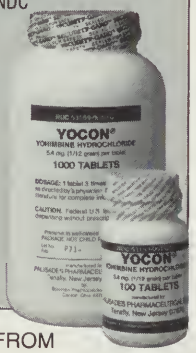
**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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**References:**


1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.


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## (sucralfate)

**BRIEF SUMMARY**

### CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

### PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

**Drug Interactions:** Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

**Pregnancy:** Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in children have not been established.

### ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

### DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

### HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

**References:**


1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 62-69, 1984.


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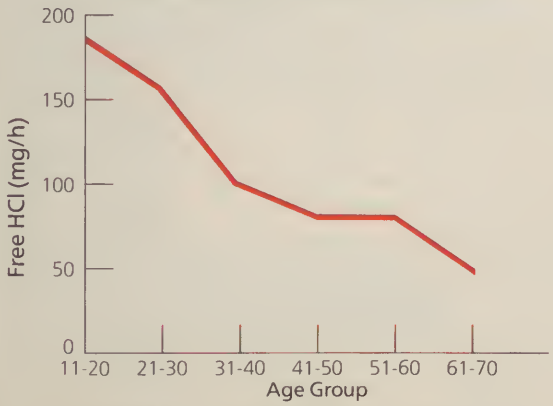
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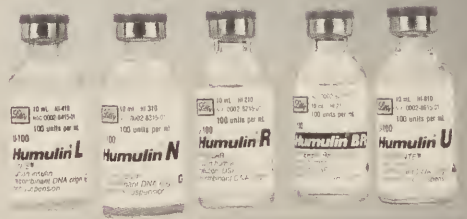
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**CME Courses:** For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**Mar 24–25 Fourth National Traumatic Brain Injury Symposium "The Neglected Disease,"** sponsored by the Speech-Communication Disorders Program, MIEMSS, Shock Trauma Center, Baltimore. Info: R. Schwartz 301-328-6101.

**Mar 25–26 Symposium on Urologic Cancer,** Omni International Hotel, Baltimore. Fee: $175; 10+ AMA Cat I credits.

**Apr 6 Infections in the Elderly,** Sheraton Inner Harbor Hotel, Baltimore. Fee: $25; 5 AMA Cat I credits.

**Apr 14–15 Second Annual Department of Family Medicine Weight Disorders Symposium**—International Hotel at BWI Airport. Fee: $100; 10 AMA Cat I credits. AAFP credits available.

**Apr 21 Selected Topics in Internal Medicine,** UMAB Campus, Baltimore. Eighth in series of Dean's Conferences. Fee: $25; 5 AMA Cat I credits. AAFP credits available.

**May 16–18 Second International Conference on the Ilizarov Techniques,** Sheraton Premiere, Tysons Corner, VA. Fee: $575; 15 AMA Cat I credits.

**Jun 16–17 Seventh Annual OB/GYN Symposium,** Annapolis Hilton Hotel, Annapolis. Fee: $125; AMA Cat I credits and ACOG cognates available.

**Jun 19–24 Fourteenth Annual Family Medicine Review Course,** Sheraton Fontainebleau Inn & Spa, Ocean City. Fee: $395 (daily rates available); 20+ AMA Cat I credits. AAFP credits available.

**Visiting Professor Program**—Director of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

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### Miscellaneous Meetings

**Mar 25–27 Fifth Annual Greenbrier Psychopharmacologic Program,** sponsored by the Psychiatric Institute Foundation, Washington, DC held at the Greenbrier, White Sulphur Springs, WV. Fee: $260; 11 CME Cat I credits. Info: A. Cannamela (202-828-1888).

**Mar 28–30 NIH Consensus Development Conference: Kidney Stones—Prevention and Treatment,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a.m. and 5 p.m.).

**Apr 1 Tardive Dyskinesia: Demographics, Risk, and Treatments,** at the Psychiatric Institute Foundation, 4460 MacArthur Blvd, NW, Washington, DC 20007, noon to 1:15 p.m. Registration required (202-944-3584). Additional info: M. Burge (202-828-1888).

**Apr 8–9 Current Topics in Adolescent Psychiatry,** sponsored by the Psychiatric Institute Foundation, Washington, DC and held at the Park Hyatt Hotel, 24th at M St NW, Washington, DC 20037. Fees: $160 for two days; student/resident/intern, $100 for two days. 11 CME Cat I credits for physicians; 11 Cat A credits for psychologists. Info: A. Cannamela (202-828-1888).

**Apr 14–16 Common Hand Problems and Acute Injuries of the Hand and Upper Extremity—Chronic Wrist Pain,** Park Hyatt Hotel, Washington, DC, sponsored by the National Hand Research and Rehabilitation Fund, Inc. Fee: $300, 19 Cat I credits. Info: M. Sorenson, The Hand Surgery & Rehabilitation Center, 622 Massachusetts Ave., NE, Washington, DC 20002 (202-829-1000).

**Apr 19 Point/Counterpoint—Inpatient vs Outpatient: Competitive or Compatible?** sponsored by the Psychiatric Institute Foundation, Washington, DC and held at the Conference Center at National Place, National Press Bldg, 13th Floor Lounge, 14th and F Sts NW, Washington, DC 20045. Fee: $10 for program/breakfast: 1.5 Cat I CME credits. Info: A. Cannamela (202-828-1888).

**Apr 20–24 Second Annual Review and Update in Critical Care Medicine,** cosponsored by the Center for Bio-Medical Communication and George Washington University School of Medicine, to take place in the Washington, DC area. Fee: $675. Info: Svetlana Lisanti 201-385-1808.

**Apr 22–24 Third International Interdisciplinary Conference on Hypertension in Blacks,** Hyatt Regency Hotel, Inner Harbor, Baltimore. Info: C. Cate, International Society on Hypertension in Blacks, 69 Butler St SE, Atlanta, GA 30303 (404-589-3810).

**Apr 22–24. Twenty-third Annual Pediatric Springfest: Adolescent Medicine, Infectious Disease, and Office Pediatrics.** 11.5 AMA Cat I credits, 11.5 AAP PREP credits, and 1.2 CEU credits by Virginia Commonwealth University. Info: Ann Potter 804-786-0494.

**May 2–4 NIH Consensus Development Conference: Cochlear Implants,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a.m. and 5 p.m.).

**May 4–6 1988 Region II & III High Blood Pressure Control Conference,** Omni Hotel in Richmond, VA. Info: P. Ciavarella or J. Richardson, conference co-chairpersons, Virginia Dept. of Health 804-786-4065.

**May 6 Psychiatric Outcomes of Neurodevelopmental Disabilities,** Psychiatric Institute of Washington Gymnasium, 4460 MacArthur Blvd NW, Washington, DC 20007, Noon–1:15 p.m. Registration required (but no fee) for program/lunch; 1 Cat I credit for physicians; 1 Cat A credit for psychologists. Info: M. Burge (202-828-1888).

**May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session,** Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

**Jun 27–29 NIH Consensus Development Conference: Perioperative Red Cell Transfusion,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-469-MEET).

**Shady Grove Adventist Hospital,** 9901 Medical Center Drive, Rockville, MD 20850. Grand Rounds:

**Mar 24** Clinical Approach in Evaluating Male Reproductive Disorders

• • •

### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–1988. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Mar 19–20 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization.** Fee: $390; 14 AMA Cat I credits. Info: J. Ryan 301-955-6046.

**Apr 11–16 Pediatric Trends 1988.** Fee: $500, residents and fellows $350; 45 AMA Cat I credits, 45 PREP AAP credits. Info: P. Macedonia 301-955-6085.

**Apr 22–23 Pediatric/Adult Clinical Update in Allergy for the Practicing Physician,** Annapolis Ramada, Annapolis. Fee: $225. Info: P. Macedonia 301-955-6085.

**Apr 29 Ophthalmic Nursing Seminar—Update '88.** Fee: $65 or $55 in per person for groups of 7 or more. Appropriate credits have been applied for. Info: P. Macedonia 301-955-6085.

**Jun 1–18 First Summer Institute in Environmental Studies,** sponsored by The Johns Hopkins School of Hygiene and Public Health, Department of Environmental Sciences. Info: Dr. J. Corn 301-955-2609.

**Jun 2–3 Broyles Symposium: The Science and Surgery of Laryngeal Cancer.** Fee: $275; 13 AMA Cat I credits. Info: F. Boling 301-955-6085.

**Jun 20–22 An Advanced Pediatric Life Support Course.** Fee: $415; 20 AMA Cat I credits, other appropriate credits pending. Info: P. Macedonia 301-955-6085.

**Jul 10–13 March of Dimes Clinical Genetics Conference: Heritable Disorders of Connective Tissue and Skeletal Dysplasias,** Baltimore, Convention Center. Fees: before June 1, $150; thereafter, $175. Student rates available. 21 AMA Cat I credits, 2.1 CEUs. Info: C. Kearney 301-955-3168.

**Reproductive Endocrinology Lecture Series 1988,** Thursdays through May 12, 3:30 to 4:30 p.m., Jones Conference Rm. Houck Bld, Rm 246, 600 N. Wolfe St, Baltimore, MD 21205. Free to members of the medical profession; 1 AMA Cat I credit per hour. Info: F. Boling 301-955-6085.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/11/88–12/5/88. Info: Celia Jarvic 301-955-8450.

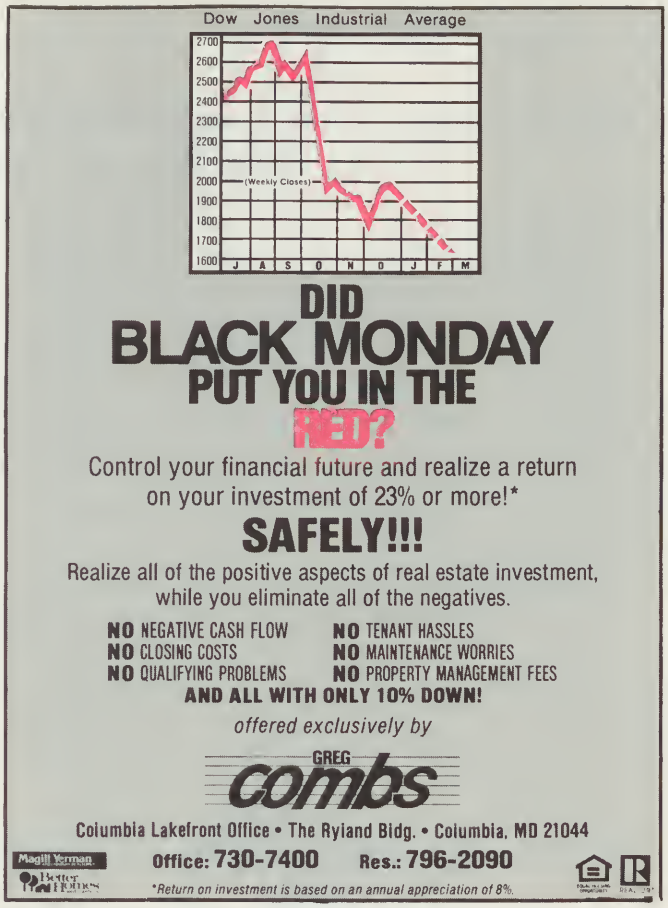
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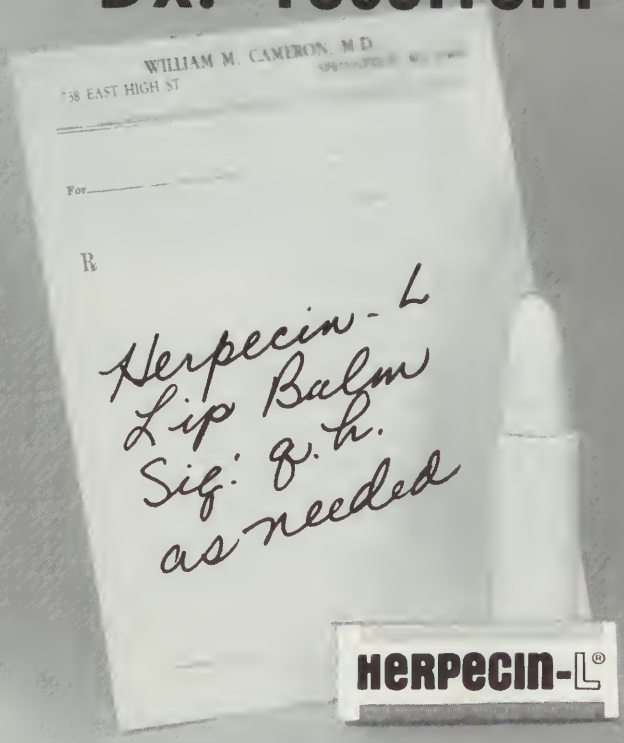
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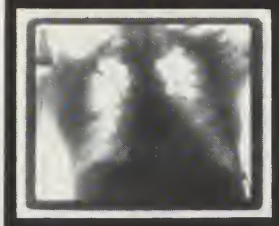
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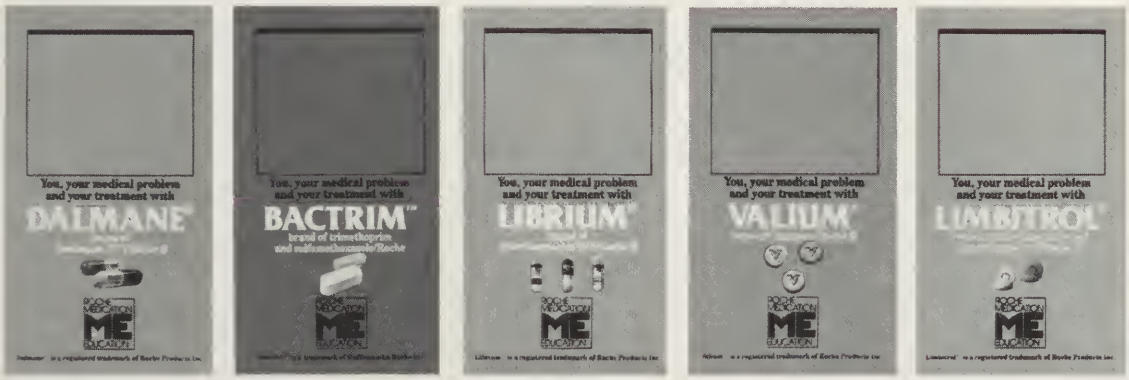
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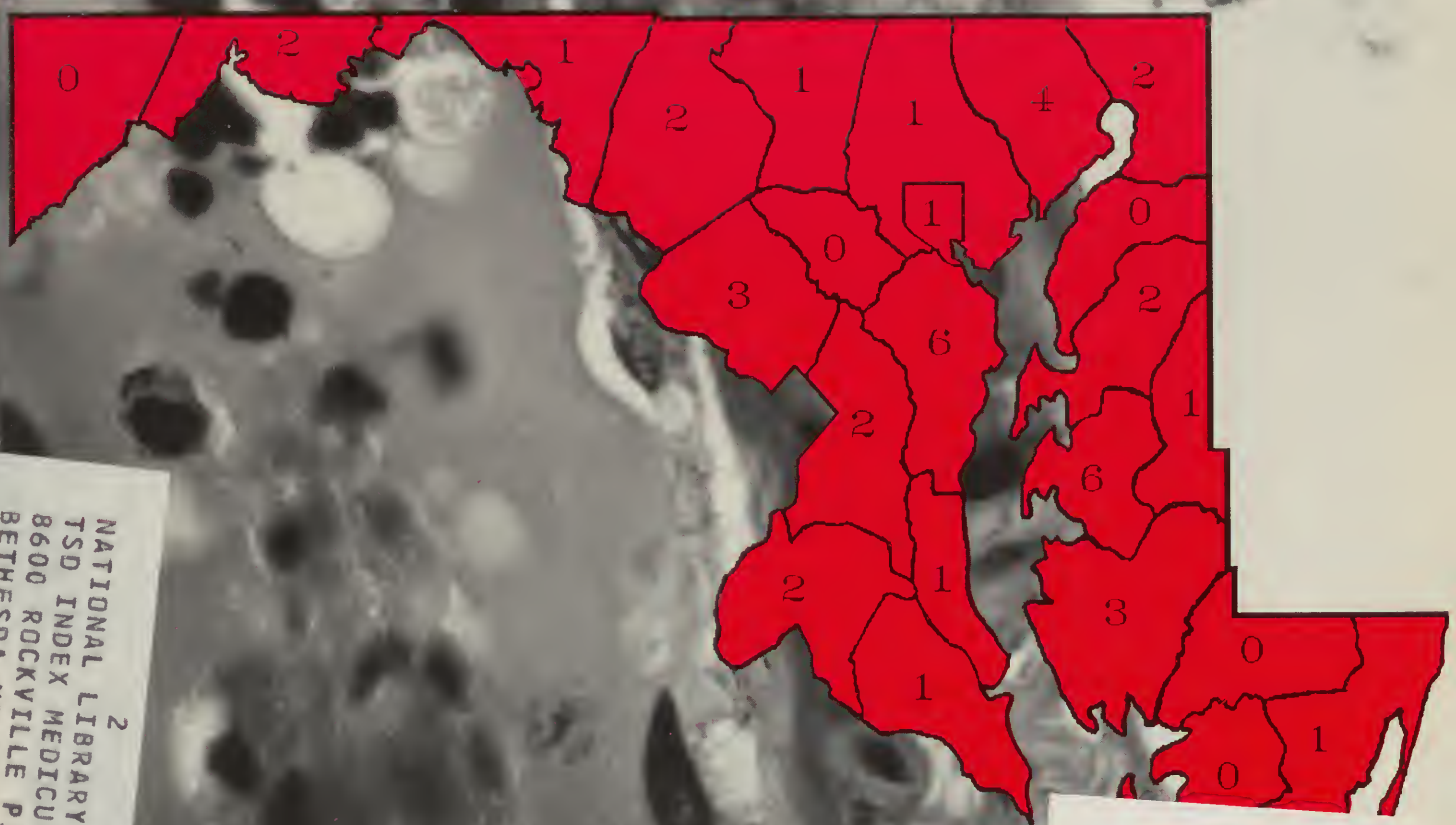
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## Rocky Mountain Spotted Fever
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# MMJ

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# Maryland Medical Journal

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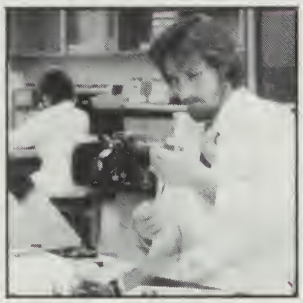
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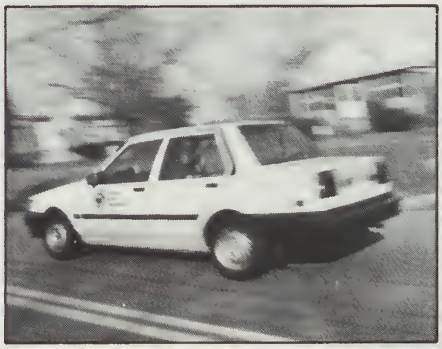
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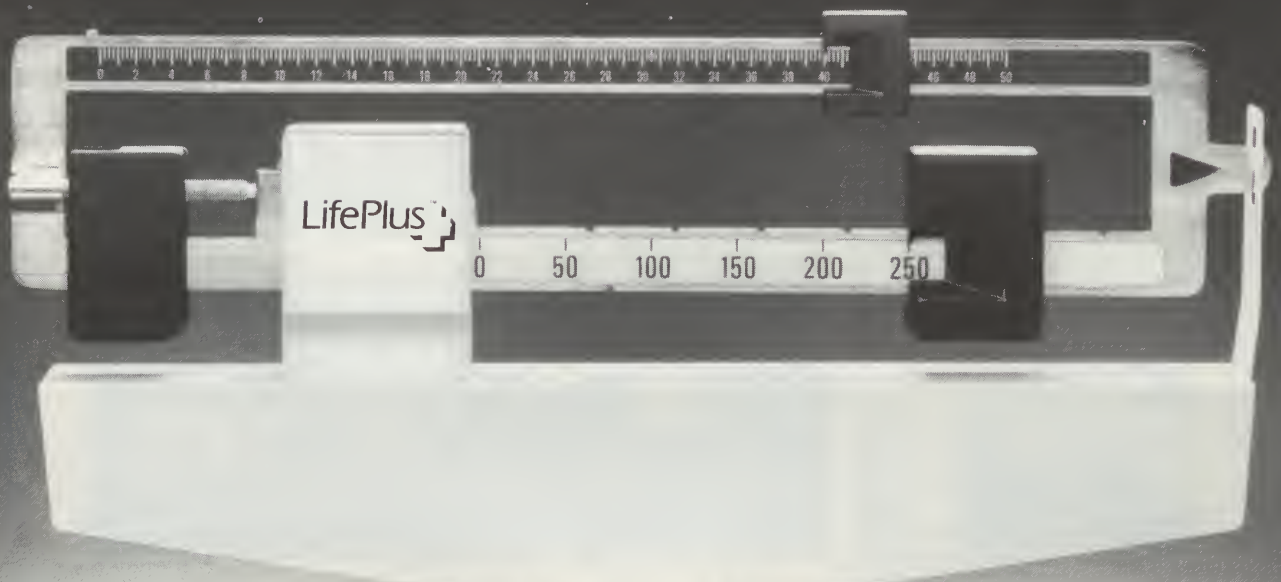
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*Cover:* Photomicrograph of Rocky Mountain Spotted Fever. Map source: Christina Lazar MD, MPH, Chief of Division of Communicable Disease Surveillance, Epidemiology and Disease Control Program, Maryland DHMH.

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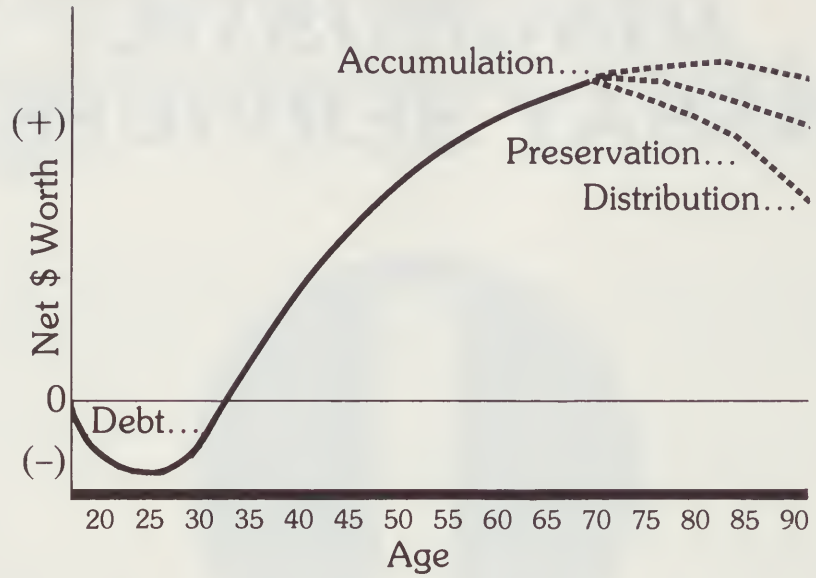
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COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
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## APRIL 1988
## ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever (RMSF) is caused by Rickettsia rickettsii. The microorganism enters primarily the endothelial cells of small capillaries and venules, and produces a vasculitis with intravascular coagulation.

The incubation period is usually a week, but may range from one to ten or more days, and is probably a function of the size of the inoculum. Disease onset is frequently sudden with fever, headache, and myalgias. A rash appears on the third to fifth day. The lesions are macular, rose colored, blanching, and one to four millimeters in size. The rash first appears on the feet and hands and then rapidly spreads to the trunk. Two-thirds of patients have the rash on the palms and the soles. If treatment is delayed, the rash becomes petechial and then purpuric. Some fulminant cases may end in death within five days prior to the onset of rash. Recent studies have shown that up to 25 % of patients may have coryza, dyspnea, pulmonary edema or interstitial pneumonia. Clinically inapparent cases have also been described.

The most frequent misdiagnosis is measles or atypical measles in vaccinated children. Other febrile illnesses to be considered in the differential diagnosis are meningococcemia, typhoid fever, leptospirosis, infectious mononucleosis, scarlet fever, rheumatic fever, rubella, and enteroviral infections.

Treatment should be started early based on clinical diagnosis. Tetracycline (25-50 mg/kg/per day) which should not be given to children less than nine years old, or chloramphenicol (50 mg/kg/per day) is given orally in four divided doses and continued for two-three days after the temperature reaches normal. Treatment is given for five to seven days.

To confirm the clinical diagnosis (definite case) CDC and the Council of State and Territorial Epidemiologists recommend:

1. Four-fold or greater rise in antibody titer to the spotted fever group antigen by immunofluorescent antibody (IFA), complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination (IHA) test.

2. Single titer $\geq$ 1:64 by IFA or $\geq$ 1:16 by CF.

3. Positive immunofluorescence of skin lesion obtained by biopsy or of organ tissue at autopsy.

4. Isolation of R. rickettsii.

Probable cases are indicated by:

1. Four-fold rise in titer or a single titer $\geq$ 1:320 by Proteus OX-19 or OX-2.

2. Single titer $\geq$ 1:128 by LA, IHA or MA.

Convalescent blood is best obtained two to three weeks after the onset of illness. Occasionally, the rise in titers may be delayed for four or more weeks if antibiotic therapy is initiated early.

RMSF is not directly spread from person-to-person. Transmission ordinarily occurs through the bite of an infected tick. In the eastern and southern parts of the country, the common vector is the dog tick (Dermacentor variabilis); in the Rocky Mountain states--the wood tick (Dermacentor andersoni). Higher humidity and temperature, and the proper vegetation, influence tick distribution. Studies on the prevalence of infection in ticks have shown that in a given area, only a small percentage of ticks are infected and this has given rise to the concept of geographic islands of infection. Ticks remain infected for life (18 months) and the adult female transmits the rickettsiae transovarially to all of its larvae for up to 12 generations. Ticks might also become infected by feeding on an infected mammal. In the winter months, the ticks hibernate and R. rickettsii exists in a non-virulent phase. The virulent, infection-causing phase may be reactivated within several hours of the ticks' having had a fresh blood meal or when the tick is incubated at 37°C for 24 hours.

Ticks require different hosts while going through the stages of egg, larva, nymph and adult. A study in Maryland and Virginia in the late sixties showed that 15 different mammals, including field mice, and 18 types of birds can be intermediate hosts and reserviors of infection. Dogs, in which infection and illness can occur with rickettsemia lasting for at least two weeks, are most often implicated in the transmission of infected ticks to humans.

Reporting of RMSF in the USA started in 1920. Introduction of effective antibiotics in 1949 marked a decline in reports and drastic reduction in fatal cases. A rise in numbers was noted during the Seventies, probably due to better reporting and surveillance stimulated by CDC. The illness occurs from April through September, with highest incidence among children less than ten years of age.

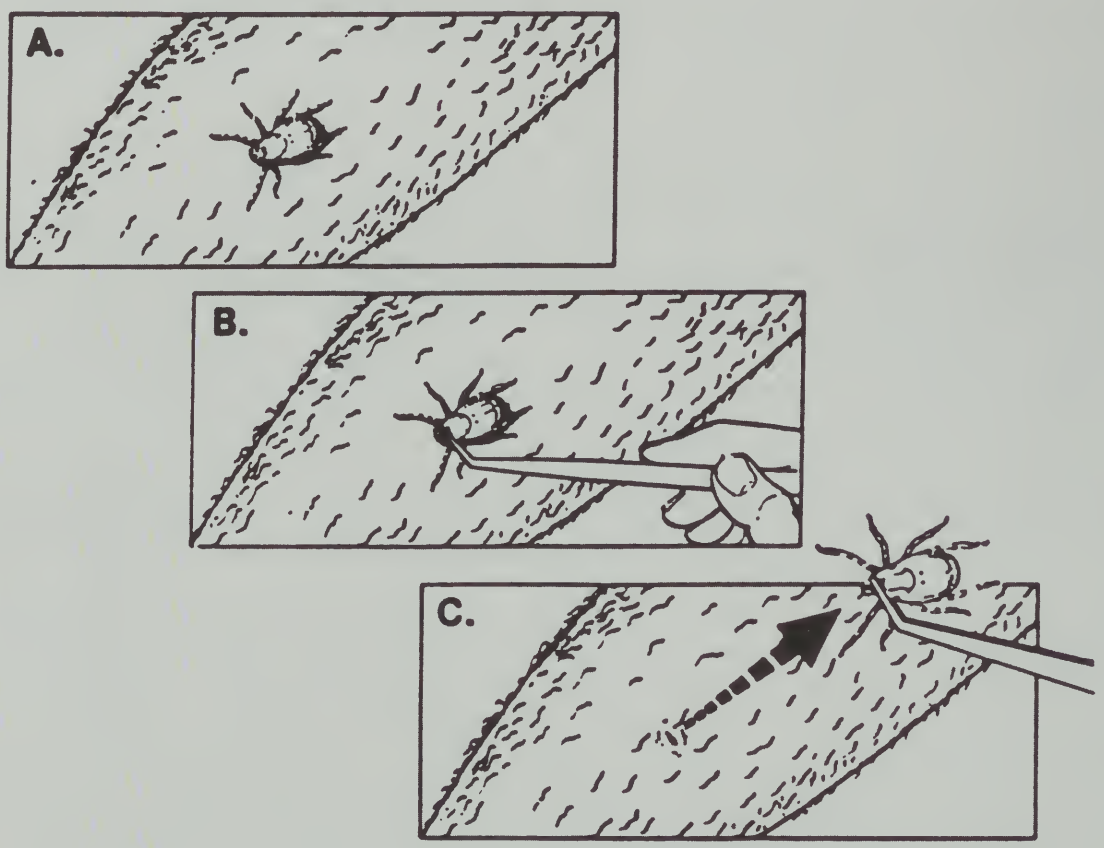
The incidence rate in the USA in 1986 was 0.32 cases per 100,000 with 755 reported cases. In 1987, the incidence was 0.24 cases per 100,000 with 592 cases reported (provisional data). In 1986, the South Atlantic region (which includes Maryland), accounted for 44 percent of the total number of cases in the United States. Mortality, which is at present about three percent, consistently shows the highest rates in the 40-59 year old age group. Fatalities are directly related to delay in diagnosis, failure to obtain history of tick exposure, travel in counties with tick-infested areas and inappropriate antibiotic treatment.

In Maryland, in 1987, 43 patients with RMSF were reported for an incidence of one case per 100,000 population. This was a 48% increase from 1986, when 29 cases were reported at the rate of 0.7 per 100,000. All patients were investigated, followed-up and CDC RMSF Case Report forms were submitted on 100 % of them. The first three cases were noted in April, most occurred in May (15) and June (13), and the last one in September. Most affected were Anne Arundel and Talbot counties, each with six cases, followed by Harford (4), Dorchester (3) Frederick (3) and Montgomery (3). Garrett, Howard, Kent, Somerset and Wicomico had none. Two cases belonged to the same family. The youngest patient was 17 months old, the oldest 80 years of age, but 40% were 14 or less and almost 80% were less than 36. The male to female ratio was 1.5 to 1 and 88 % were white. Seventy-nine percent of reported cases required hospitalization; admission occurred on average on the 4.4th day after the onset of symptoms with treatment starting at the same time. Most physicians treated their patients with chloramphenicol (18), followed by tetracycline (13) or both (5). There were no fatalities and all patients recovered fully. Twenty-seven (63 percent) of the cases were confirmed by IFA, CF, or FA of skin obtained through biopsy or by latex agglutination. Two cases were categorized as probable; and the rest were not confirmed, mainly because the patients or their parents (in the case of minors) refused further testing. Sixty-seven percent of the patients had the history of a tick bite or attachment within fourteen (14) days of onset, 21 percent had visited a known tick infested area; the rest had no available history of exposure.

RMSF should be reported to the local health department. We urge physicians treating such patients to try to obtain convalescent blood to confirm the clinical diagnosis.

**RECOMMENDED METHOD FOR TICK REMOVAL:**

Ticks should be removed by grasping them gently with tweezers as closely as possible to the point of attachment and pulling slowly and steadily. If a portion of the mouth part remains, it should be treated like any other small foreign body; it may cause irritation, but it will not increase the risk of contracting RMSF. The fingers, protected with tissue paper, may be used to remove a tick from a person if tweezers are not available, but should always be washed after the removal of a tick. The fingers should not be used to de-tick dogs. Persons living and working in tick-infested areas should be educated about the prevention, symptoms, and signs of the disease. No vaccine against RMSF is currently available. Preventing RMSF is best accomplished by avoiding tick-infested areas and by frequent and careful searches for ticks on the body of persons who may have been in such areas.




Prophylactic treatment of individuals that had tick bites or attachments is not recommended. Instead, the patient should take and record oral temperature twice a day, at 8 a.m. and 8 p.m. for two weeks. At the first sign of temperature above baseline, a physician should be notified immediately, blood specimen should be drawn for serological tests and specific antirickettsial therapy begun promptly. Delayed treatment increases complications and the probability of death.

**REFERENCES ARE AVAILABLE UPON REQUEST.**

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# A Practical Approach to Dietary Therapy for Patients with High Blood Cholesterol Levels

**The Report of the Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults, National Cholesterol Education Program, contains a detailed and practical approach to dietary therapy for the patient classified as having high total blood cholesterol and high-risk LDL-cholesterol. We have adapted relevant sections of the Report.**

Three dietary habits typically contribute significantly to elevated blood cholesterol. First is a high intake of saturated fatty acids. The average intake is 13 to 15 percent of total calories, but many Americans consume 15 to 20 percent of their calories as saturated fatty acids. Second is a relatively high intake of cholesterol. Many patients with high-risk LDL-cholesterol levels exceed the current average intake of about 350 to 450 mg per day. Third is a high caloric intake that exceeds body requirements and commonly causes obesity. The aim of dietary therapy is to reverse these excesses while maintaining and promoting good nutrition. **Diet is the cornerstone of treatment of high-risk cholesterol levels.** The view that diet modification is impractical or doomed to failure is not justified for most patients. Many individuals have modified their diets and obtained a substantial reduction in cholesterol levels.

The new Adult Treatment Guidelines of the National Cholesterol Education Program describe specific therapies for high blood cholesterol; modification of diet is an essential element.* The initial diet modifications recommended for patients are very similar to those recommended by the American Heart Association and other organizations as part of a population-based approach for lowering cholesterol. Diet recommendations are detailed to provide to patients in a medical treatment setting with an intensive type of dietary intervention referred to as "dietary treatment." The diets recommended in the Adult Treatment Report are consistent with good nutrition, and their aim is to achieve healthy eating patterns. Physicians should emphasize to patients that the goal is not a temporary "diet" but a permanent change in eating behavior.

## Step-One and Step-Two Diets

Diet modification should occur in two steps, as outlined and compared in Table 1. The **Step-One Diet** calls for the reduction of the major and obvious sources of saturated fatty acids and cholesterol in the diet; for many patients this can be achieved **without** a radical alteration in dietary habits. The **Step-Two Diet** requires careful attention to the whole diet so as to reduce the intake of saturated fatty acids and cholesterol to a minimal level compatible with an acceptable and nutritious diet. Saturated fatty acids and cholesterol are not essential nutrients, and neither is required in the diet. The body can make these lipids in abundance, and they can be transported from one tissue to another to assure that any local shortage is supplied by lipids produced elsewhere in the body. The real need is to reduce dietary saturated fatty acids and cholesterol to the levels required to achieve the goals of LDL-cholesterol lowering while providing a diet that is nutritious and palatable. The fat-modified diets proposed in the Report are designed to achieve these aims.

Adherence to the prescribed diet is facilitated by monitoring the patient's response. The Step-One Diet should be employed for three months, and if the desired response is not obtained despite good diet adherence, the patient can progress to the Step-Two Diet for another three months. During this period, serum cholesterol levels should be monitored at regular intervals (described below).

**For most patients, dietary therapy to lower serum total and LDL-cholesterol should be employed for at least six months before considering drugs. Exceptions to this approach are patients with severe elevations of blood cholesterol and patients with definite CHD.**

Most patients should be able to adopt and adhere to the Step-One Diet. Table 2 outlines ways to achieve the goals of dietary therapy, and a copy may be given to the patient along with additional educational materials. It should be emphasized to the patient that the recommended diet can be both tasty and nutritious and that many choices of high-quality and acceptable foods are available in stores and restaurants.

A few general dietary changes underlie implementation of the Step-One Diet. To decrease intake of total fat, saturated fatty acids, and cholesterol, attention should be given to reducing foods containing butter fat: butter, cheese, ice cream, cream, whole (4 percent) milk,

* *MMJ* 37 (1988):24–25.

*HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.*

## Table 1. Dietary Therapy of High Blood Cholesterol

| Nutrient | Recommended Intake | |
|---|---|---|
| | Step-One Diet | Step-Two Diet |
| Total fat | Less than 30% of total calories | |
| Saturated fatty acids | Less than 10% of total calories | Less than 7% of total calories |
| Polyunsaturated fatty acids | Up to 10% of total calories | |
| Monounsaturated fatty acids | 10 to 15% of total calories | |
| Carbohydrates | 50 to 60% of total calories | |
| Protein | 10 to 20% of total calories | |
| Cholesterol | Less than 300 mg/day | Less than 200 mg/day |
| Total calories | To achieve and maintain desirable weight | |

## Table 2. Recommended Diet Modifications to Lower Blood Cholesterol
## The Step-One Diet

| | Choose | Decrease |
|---|---|---|
| Fish, chicken, turkey, and lean meats | Fish, poultry without skin, lean cuts of beef, lamb, pork or veal, shellfish | Fatty cuts of beef, lamb, pork, spare ribs, organ meats, regular cold cuts, sausage, hot dogs, bacon, sardines, roe |
| Skim and low-fat milk, cheese, yogurt, and dairy substitutes | Skim or 1% fat milk (liquid, powdered, evaporated) | Whole milk: (4% fat) regular, evaporated, condensed; cream, half and half, 2% milk, imitation milk products, most nondairy creamers, whipped toppings |
| | Buttermilk | |
| | Nonfat (0% fat) or low-fat yogurt | Whole-milk yogurt |
| | Low-fat cottage cheese (1% or 2% fat) | Whole-milk cottage cheese (4% fat) |
| | Low-fat cheeses, farmer or pot cheeses (all of these should be labeled no more than 2-6 g fat per oz) | All natural cheeses (e.g., blue, roquefort, camembert, cheddar, swiss) |
| | | Low-fat or "light" cream cheese, low-fat or "light" sour cream |
| | | Cream cheeses, sour cream |
| | Sherbet | Ice cream |
| | Sorbet | |
| Eggs | Egg whites (2 whites = 1 whole egg in recipes), cholesterol-free egg substitutes | Egg yolks |
| Fruits and vegetables | Fresh, frozen, canned, or dried fruits and vegetables | Vegetables prepared in butter, cream, or other sauces |
| Breads and cereals | Homemade baked goods using unsaturated oils sparingly, angel food cake, low-fat crackers, low-fat cookies | Commercial baked goods: pies, cakes, doughnuts, croissants, pastries, muffins, biscuits, high-fat crackers, high-fat cookies |
| | Rice, pasta | Egg noodles |
| | Whole-grain breads and cereals (oatmeal, whole wheat, rye, bran, multigrain, etc.) | Breads in which eggs are major ingredient |
| Fats and oils | Baking cocoa | Chocolate |
| | Unsaturated vegetable oils: corn, olive, rapeseed (canola oil), safflower, sesame, soybean, sunflower | Butter, coconut oil, palm oil, palm kernel oil, lard, bacon fat |
| | Margarine or shortenings made from one of the unsaturated oils listed above | |
| | Diet margarine | |
| | Mayonnaise, salad dressings made with unsaturated oils listed above | Dressings made with egg yolk |
| | Low-fat dressings | |
| | Seeds and nuts | Coconut |

and even 2 percent milk. Only lean cuts of meat should be selected, visible fat should be trimmed away, and fat should be allowed to drain from meat after cooking. The skin of chicken should be removed, and fish should be substituted frequently for meat. Consumption of egg yolks and organ meats (liver, brain, sweetbreads) should be reduced. Shrimp, lobster, and other shellfish contain varying amounts of cholesterol but are low in fat, and thus may be eaten occasionally. The vegetable oils rich in saturated fatty acids (coconut oil, palm kernel oil, and palm oil) are used in some commercial foods and food products; products that list these ingredients on the label generally should be avoided.

An important adjunct to long-term change in eating behavior is a regular exercise program. Especially useful forms of exercise are activities that require movement of the body over distance: walking, climbing stairs, running, cycling, and swimming. Improvements in cardiovascular fitness result from exercising regularly at moderate intensity for 15 to 30 minutes at least every other day. However, vigorous exercise must be carried out with caution in high-risk persons and only with the advice of a physician and under the supervision of trained personnel.

### Expected Responses to Dietary Therapy

The degree of reduction of LDL-cholesterol levels that can be achieved by dietary therapy depends on the dietary habits of the patient before starting the diet and on the inherent responsiveness of the patient. In general, patients with high cholesterol levels show a greater absolute reduction in total and LDL-cholesterol concentrations than do individuals with relatively low cholesterol levels. Metabolic ward studies suggest that switching from the typical American diet to the Step-One Diet could reduce cholesterol levels on average by 30 to 40 mg/dl. Advancing to the Step-Two Diet can be expected to cause a further decline of approximately 15 mg/dl in cholesterol levels. Some individuals may demonstrate even greater reductions on the two diets, and others will have lesser responses. Most of the decrease in total blood cholesterol occurs in the LDL fraction.

### Health Professionals' Roles in Dietary Charge

The success of dietary therapy will depend to a large extent on the physician's attitudes, knowledge, and skills in motivating the patient and in organizing a team approach to dietary therapy. A positive attitude on the part of the physician is absolutely vital. The physician should describe to the patient his/her category of high blood cholesterol and should give an overview of the therapeutic plan. The role of diet and possibly drugs should be discussed. The physician will need to review the patient's past dietary history. The patient should be questioned about current dietary habits with special attention to intakes of food rich in saturated fatty acids and cholesterol. The need to modify eating behavior to achieve the goals of therapy should be indicated, and the plan for carrying out dietary treatment, as it involves other members of the team, can be described. Finally, the physician has a vital role to play in monitoring response, in reinforcing the diet message, and in leading the therapeutic team. For assessing adherence to the diet, the physician can review the contents of Table 2 with the patient at follow-up visits.

The physician's staff should receive appropriate training for their roles in patient management, including aiding in further dietary assessment and in dietary education and counseling. Nurses and other assistants can play key roles in educating patients, in promoting behavioral changes, and in monitoring dietary changes. Various educational materials produced by the National Cholesterol Education Program and the American Heart Association can assist in dietary education for patients.

For some patients referral to a registered dietitian (RD) can facilitate dietary instruction and monitoring of adherence. RDs are educated in the science of nutrition and are professionally trained in dietary intervention. They must meet uniform standards for registration. The term "nutritionist" is used in a variety of ways. Some nutritionists are registered dietitians, but others may not be registered and may not have the clinical training in dietary counseling of an RD. Although such nutritionists may play a role in dietary education, referral to a registered dietitian is particularly valuable for more intensive dietary therapy, such as the Step-Two Diet, and evaluation of nutritional adequacy. Patients who had difficulty in adhering or responding to the Step-One Diet also have much to gain from counseling by a registered dietitian. Patients who are not initially successful in the Step-One Diet may be referred to a dietitian for another Step-One Diet trial before progressing to the Step-Two Diet.

Dietitians can be identified through local hospitals as well as through state and district affiliates of the American Dietetic Association, (208 South LaSalle Street, Chicago, IL 60604), which maintains a roster of dietitians and responds to written requests for assistance in locating a registered dietitian in a given area. Dietitians with particular expertise in cholesterol management are available in most large medical centers where they are often part of a multidisciplinary lipid clinic team or cardiac rehabilitation team.

### Monitoring and Follow-up

After the patient starts the **Step-One Diet**, the total blood cholesterol level should be measured at four to six weeks and at three months. This will allow the patient time to adopt new eating habits and to respond to the dietary change. At the end of three months, the physician should assess the patient's adherence to the diet plan and response to dietary therapy, judged on the basis of the change in blood cholesterol level. If the

response is satisfactory, that is, if the total cholesterol monitoring goal is met (<240 mg/dl without definite CHD or two other risk factors, <200 mg/dl with definite CHD or two other risk factors), then the LDL-cholesterol level should be measured to confirm that the LDL-cholesterol goal has been met. If the LDL goal is met, long-term monitoring can begin. If the response is not satisfactory, the patient generally should be referred to a registered dietitian and to the Step-Two Diet or to another trial on the Step-One Diet. If the latter, the patient should be reevaluated after four to six weeks and three months with progression to the Step-Two Diet if the response is still not satisfactory.

On the **Step-Two Diet**, blood cholesterol levels should be measured after three to four weeks and three months of therapy. After three months of treatment with the Step-Two Diet, the physician should reassess the patient's adherence and response to the diet. If the desired goal for lowering blood cholesterol has been attained, and a measurement of LDL-cholesterol level confirms that the LDL goal has been met, long-term monitoring can begin; if not, drug therapy should be considered.

### Reevaluation

A follow-up measurement of the patient's cholesterol level should be done at one year and then at one to two year intervals. More frequent follow-up or measurements of lipoprotein fractions can be made at the discretion of the physician. Extra attention should be given to the follow-up of young adults with borderline-high blood cholesterol. Periodic determinations of blood cholesterol will indicate to the patient the physician's heightened and continuing concern. Knowledge that the cholesterol level will be checked periodically should motivate the patient to adhere to the recommended diet, and such measurements will enable the physician to detect an increase in cholesterol level to the high blood cholesterol range, should that occur.

*To obtain a copy of the Adult Treatment Panel's full report, write to: National Cholesterol Education Program, National Heart, Lung, and Blood Institute, C-200, Bethesda, MD 20892.*


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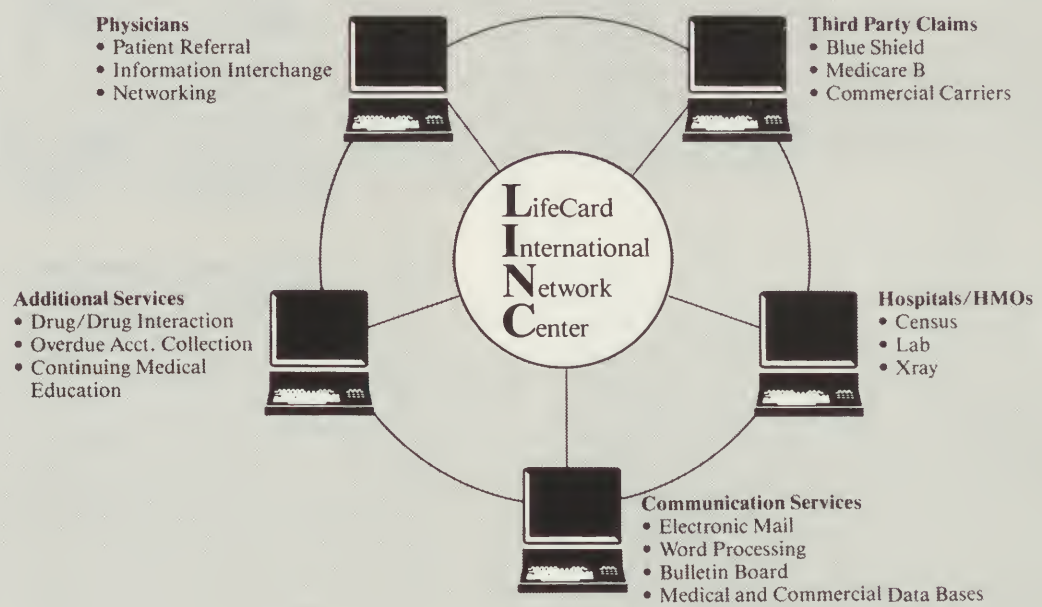
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# Executive Director's Newsletter

April 1988

**RELATIVE VALUE SCALES**

During the 1987 AMA Annual Meeting, the Board of Trustees filed a report that described the status of the Harvard/AMA RVS Project. The report indicated that use of the Harvard/AMA RVS in a Medicare fee schedule system appears likely.

The following data on the resource costs of providing physician services were used in the development of the RVS: Time involved in providing the service or procedure (including preoperative and postoperative times); Intensity of services (defined as encompassing technical skill, physical and mental effort, judgment, and risk to the patient); Amortized cost of specialty training (including factors such as length of residency training and earnings by specialty); and practice costs (including professional liability insurance premiums).

Several issues still must be addressed by the AMA, such as including the possibility of gradual implementation, monetary conversion factors to change the RVS to physician payments, updating mechanisms for both the RVS and conversion factor, and specialty and geographic variations.

The Board remains convinced that an RVS resulting from this study could be the basis for a Medicare physicians reimbursement system that would be acceptable to the federal government, Medicare beneficiaries, and medicine. However, the Board continues to emphasize that the AMA is not committed to support any RVS implementation that would violate AMA policies, especially the Association's long-standing position against mandatory acceptance of third-party payment as payment in full. The Board will continue to inform the House of Delegates and the Federation about the progress of the Harvard/AMA RVS project.

**MEDICARE**

Med-Chi has received complaints that the Medicare carrier, Blue Cross and Blue Shield of Maryland, has issued letters to physicians denying unassigned claims because of the carriers perception that the medical care rendered was not medically necessary. Med-Chi is on record as vigorously opposing this action because of its obvious and inherent administrative problems and because of the damaging effect this has on physician/patient relationships.

The carrier has been requested to provide information on the number of such letters directed to physicians regarding the denial of unassigned claims for "the lack of medical necessity," the number of appeals initiated by physicians, and following appeal, the number of referrals made from the initial determination of "medically unnecessary." Med-Chi members are requested to provide examples of this action taken by either Medicare carrier in Maryland.

**OBSTETRICAL MALPRACTICE SURVEY**

In early March, a survey was sent to the 623 Med-Chi members who identified themselves in the Faculty's membership records as specializing in obstetrics. To date, 336 surveys have been returned, a 54% response. Of those who responded, 226 physicians indicated that they continue to practice obstetrics today.

The survey asked how physicians' would respond to increases in medical malpractice insurance costs. Of the responding obstetricians, 14% indicated a 15% increase in the rate would force them to stop practicing obstetrics; 3% indicated they would move their practice to another state; 11% indicated they would move up their planned retirement date. When those results were examined with respect to the age of the respondents, a 15% increase in malpractice insurance rates would cause 22% of the respondents under the age of 50 to stop practicing obstetrics or move out of state.

A jump of 25% in the insurance rates would force 31% of the responding obstetricians to stop practicing obstetrics. Another 9% indicated they would seek to set up practice in another state, and 15% would move up their planned retirement dates. Such an increase would cause 48% of the respondents under the age of 50 to stop practicing obstetrics in Maryland.

If the rates skyrocketed by 35%, 43% of the respondents would stop practicing obstetrics. Another 14% would move to another state, and 13% would seek early retirement. Of the respondents under age 50, 69% stated that an increase of this magnitude would force them to stop delivering babies in Maryland.

While these figures are based on subjective responses to hypothetical questions, they do indicate the inclinations of "high-risk" physicians and suggest that the malpractice crisis is at the breaking point.

Similar surveys were sent to Faculty members who specialize in neurosurgery, orthopedic surgery, and emergency medicine. Watch for an article in MMJ detailing the full results.

**PRO PROJECT**

If you have not done so, please complete the PRO survey published in the March 1988 issue of the MMJ, and return it to the Faculty office.

The survey was designed to measure physicians' problems resulting from regulations established by HCFA and carried out by the Delmarva Foundation for Medical Care. Prompt return of the questionnaire to Med-Chi will assist us in quantifying the extent of the problem.

**WOMEN IN MEDICINE**

It is well known that women do not join organized medicine at the same rate as their male colleagues. While we are making gains in student membership at the local level, women residents and young women physicians are joining at a lower rate than their male colleagues.

Thus, May has again been designated as "Women in Medicine Recruitment Month." Med-Chi's Membership Department encourages all component medical societies to target membership recruitment toward women physicians and medical students. The number of women in medicine is continuing to increase. More than ever we need to reach out to this unrepresented group and make women physicians and medical students a vital and growing part of our medical society.

**GENERIC SUBSTITUTION**

The Maryland Board of Pharmacy's ruling on generic substitution is summarized by the following:

In Section 12-508 of the Health Occupations article, "express intent by a prescriber to dispense a prescription" under this section means that the authorized prescriber must, in his or her own handwriting, indicate on the face of the prescription that it is to be dispensed exactly as written and no generic equivalent may be used by the pharmacist in filling the prescription. The physician must write "DISPENSE AS WRITTEN" or other language clearly indicating this. Other acceptable indications in the physicians own handwriting are "DAW" or "DNS."

At the November 18, 1987 meeting of the Board of Pharmacy, it was determined that checking a block indicating that a generic equivalent may not be used is NOT ACCEPTABLE. Blocks or checks should be disregarded since they provide no real indication of the physician's handwriting.

**CANCER RISK OF PESTICIDES**

The AMA's Council on Scientific Affairs recently presented a report on the cancer risk of pesticides in agricultural workers. In summary, the report stated

that a large number of pesticidal compounds have exhibited genotoxicity or carcinogenicity in animal and *in vitro* screening tests, but none except arsenic and vinyl chloride have been proved to be a carcinogenic in man. The primary hazards of pesticides in man involve acute toxicity from dermal contact with or inhalation of a relatively large dose. One recommendation of the report suggested how physicians might deal with an emergency involving an acute pesticidal exposure.

Physicians should avail themselves of the comprehensive toxicological data supplied by their regional poison control centers, as well as be familiar with other useful services. The National Pesticides Telecommunications Network (NPTN) is a toll-free service (1-800-858-7378) with information on the recognition of pesticide poisoning and recommended treatment protocols. The Environmental Protection Agency's *Recognition and Management of Pesticide Poisonings* and *The Citizens Guide to Pesticides* can be obtained from the EPA's Office of Pesticides and Toxic Substances in Washington, DC.

Physicians who are aware of any adverse effects from a particular pesticide exposure are urged to contact EPA with details of the incident by writing or phoning Frank Davido, Hazard Evaluation Division (TS-769C), Office of Pesticide Programs, EPA, 401 M Street SW, Washington, DC 20460 (703-557-0576). Medical records will be considered confidential.

**"WALK WITH YOUR DOC"**

On Saturday morning, May 14, thousands of health-minded American families will be sharing a salutary walk around town with their physicians to promote better health and raise funds for the American Diabetes Association.

The AMA has joined Wyeth-Ayerst Laboratories, the NutraSweet Company, the Rockport Company, Feeling Fine Programs, plus community hospitals throughout the nation in sponsoring "WALK WITH YOUR DOC." Your entire family can make it a gala day by helping in this nationwide event.

For more information, contact the nearest office of the American Diabetes Association or Feeling Fine Programs, Inc., 3575 Cahuenga Blvd. West, #440, Los Angeles, CA 90068 (213-850-WALK).

Angelo J. Troisi, FACHE
Executive Director

# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the state of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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### NEW ETHICAL OPINIONS

The following Ethical Opinions were adopted by the Council at its March 26, 1988 meeting.

**FEES FOR ASSISTING AT SURGERY:** A surgeon who requires a physician as an assistant should inform his patient of the necessity for a surgical assistant. It is appropriate for a physician who acts in the capacity of a surgical assistant to bill a patient a fee that is prevalent in the community. The patient should be informed before the procedure of any charge above this fee.

**ETHICAL RELATIONSHIP OF TREATING PHYSICIAN TO PATIENT INVOLVED IN LITIGATION:** In any litigation in which a patient's medical condition is at issue and that discloses the nature of the relationship of the physician to his patient, in the absence of a subpoena, the physician is free to testify or not. The testimony of the physician is expected to be honest and without prejudice to either party.

**PHYSICIAN'S DEATH OR ILLNESS**: Should a sudden need arise to close a practice due to a physician's sudden death or illness, the next of kin should consult the physician or physician's will for direction. A physician should address this issue in his will or in a letter of instruction in order that his next of kin have some direction should he die suddenly.

If a physician's will or letter of instruction does not address this issue, the next of kin can either approach another physician to assume the practice and notify the patients or can approach the medical society for assistance.

**SALE OR CLOSING OF MEDICAL PRACTICE**: Whenever a physician's medical practice is closed or sold, notice to patients and continuity of care must be the primary concerns. Active patients should be notified as soon as possible. This may be accomplished by several different methods, including, but not limited to, the following:

a) Letter or postcard
b) Newspaper ad
c) Answering machine

## REVISION OF ETHICAL OPINIONS

The following Ethical Opinion 501.01 (b), as revised, was adopted by the Council at its March 26, 1988 meeting:

**REFERRAL BETWEEN PHYSICIAN SPOUSES**:

501. Division of Fees

The following arrangements tend to exploit the patient for financial gain and, therefore, constitute an unethical division of fees:

01. A voluntary prospective agreement between physicians for division of medical fees which is not based upon the physicians' services, responsibility, experience, or other contributions....

b) Husband/Wife Physician Teams. Referrals between spouses are not inherently unethical. However, the best interests of the patient must always be foremost. When making such referrals, the spousal relationship must always be disclosed to the patient as well as the availability of other consultants in that specialty. It is unethical to make medically unnecessary or excessive referrals between spouses.

# MR UPDATE

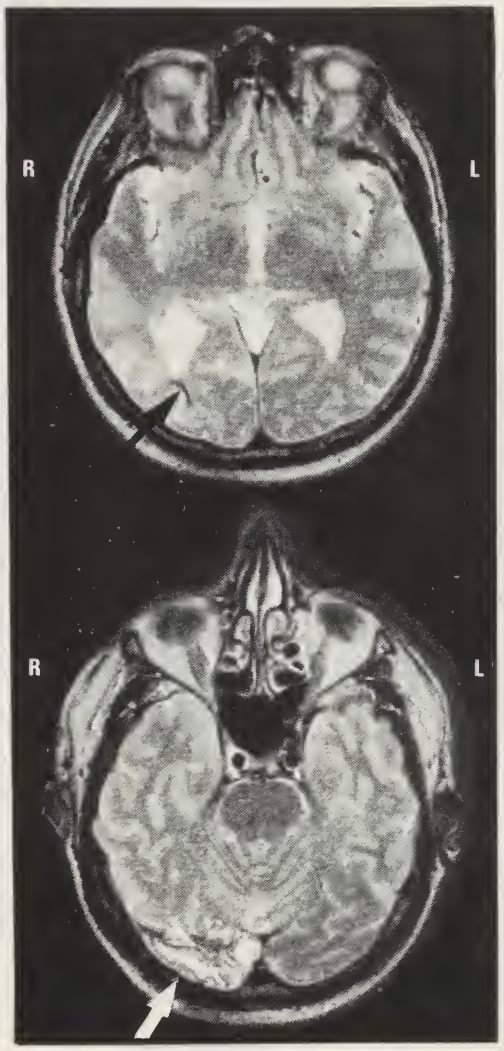
## MRI Advances the Detection of AVM's

### BRAIN EXAMINATION

**HISTORY:** A 52 year old man had two small right occipital hemorrhages, 18 months apart. After resolution, negative studies included two cerebral arteriograms and contrast CT scans.

**SCAN:** Several dark curvilinear structures, evidence of the flow void phenomenon, indicate abnormal vasculature in the right occipital lobe. Associated high signal intensity of adjacent white matter is compatible with edema, hemorrhage, or gliosis. Together these findings are consistent with occult arteriovenous malformation (AVM).

**MRI HIGHLIGHTS:** MRI is highly sensitive for AVM's which are otherwise occult by arteriography or CT scanning. These may be found in patients with spontaneous hemorrhage, seizure disorder, or other clinical presentations. In addition, the sensitivity of MRI for intracranial hemorrhage is being increased through the use of new partial flip imaging techniques. Refinements in signal processing, surface coils, and other techniques continue to expand the clinical indications of MRI. Because of its sensitivity, safety, and patient comfort, MRI is the screening technique of choice for most CNS abnormalities.




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# Carcinoma of the Pancreas and Periampullary Area, Part I

Various cancers occurring in the pancreaticoduodenal region have the same presentation, yet each has its own biological behavior. Periampullary carcinomas include those of the ampulla of the Vater, the intrapancreatic portion of the common bile duct, the head of the pancreas, and the part of the duodenum around the ampulla of Vater. Every effort should be made to differentiate these tumors from one another. In general, periampullary tumors are more amenable to surgical resection and have somewhat better prognosis than do pancreatic carcinomas.

In addition, the pancreas also can be the site of the variety of endocrine tumors that belong to the APUD system. These include the insulinoma, the glucagonoma, the gastrinoma (Zollinger-Ellison Syndrome), the vipoma (watery diarrhea and hypokalemia syndrome), and somatostatinoma.

## Carcinoma of the Head of the Pancreas

This is the most common tumor in the periampullary area. It constitutes 85 percent of all lesions and is the fourth common cause of cancer deaths in the country. It is estimated that annually over 25,000 new cases are diagnosed and a similar number of patients die of the disease. The incidence of pancreatic cancer is greater in males than in females and is more common in the fifth and sixth decades of life.

As these tumors are not common, screening for and early detection of such tumor do not exist. Patients usually present with complaints related to the upper gastrointestinal tract before the diagnosis is made.

## Diagnosis

Clinical features shared by carcinomas of the head of the pancreas as well as those of the general periampullary area include weight loss of more than 10 pounds of the ideal weight over one or two months. While anorexia and pancreatic exocrine insufficiency may play roles, they cannot explain the total picture of weight loss. It is believed some tumors secrete a material that may contribute to the anorexia and weight loss.

Epigastric or upper quadrant pain radiating to the back occurs in about 75 percent of the patients. Early in the disease, the pain can be relieved by changing position and using aspirin. Later the pain requires special pain control methods.

Jaundice occurs 50 to 90 percent of the time, and early in the disease, it is due to the obstructive characteristics of these tumors. Later, jaundice could be due to massive liver metastases. Hepatomegaly and a palpable gallbladder may occur in 30 to 50 percent of the cases. Neither finding is indicative of unresectability.

Small pancreatic tumors as well as periampullary tumors can cause complete obstruction and may lead to such clinical presentation. Rarely, the patient may present with diabetes of sudden onset. Pancreatic cancer depression is a phenomenon that has been claimed to be due to low enkephalines.

Certain laboratory tests can provide clues to the diagnosis. Elevated serum alkaline phosphatase followed by elevated serum bilirubin are indicative of obstructive jaundice. In addition, elevated levels of carcinoembryonic antigen (CEA) and iron deficiency anemia may add to the index of suspicion. Of less practical value are levels of serum lipase, amylase, glucagon, insulin, calcitonin, and oncofetal antigen. These tests do not differentiate benign from malignant lesions of the head of the pancreas or of any other sites of the periampullary region. Routine upper gastrointestinal series by barium studies may suggest the diagnosis of a large ampullary or ulcerated duodenal cancers. Encroachment on the medial wall of the duodenum will be seen in less than half the large pancreatic carcinomas.

Several diagnostic studies have been used including:

1. Ultrasonography is noninvasive, does not expose the patient to the effect of irradiation, and has the added advantage of differentiating solid masses from cystic ones. However, the imaging could be poor and not be easily interpreted by the surgeon.

2. CT scanning is another noninvasive procedure that gives excellent imaging that can be enhanced by contrast material.

3. Magnetic resonance imaging (MRI) is also noninvasive with even much better imaging that seems to give better details than CT scanning.

4. Duodenoscopy has been of great value in making the preoperative diagnosis of ampullary and periampullary lesions such as duodenal tumors. Through endoscopy, tissues can be obtained for pathological examination.

5. Endoscopic retrograde cannulation of the pancreatic and bile ducts (ERCP) may demonstrate obstruction or narrowing of either duct and allow cytological analysis of ductal secretions. However, cytological studies are diagnostic in less than one-third of the patients.

6. Percutaneous transhepatic cholangiography can be diagnostic as well as therapeutic. It can localize the site of obstruction and decompress the biliary tree, whether the obstruction is due to a benign or malignant condition.

7. Percutaneous biopsy of the lesion can be carried out under ultrasonography or CT scan control making it possible to establish preoperative diagnosis. Such biopsies can be obtained from the primary site or from metastatic deposits suspected on scanning or imaging.

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*If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).*

8. Selective cholangiography plays no role in establishing the diagnosis. The major advantage in obtaining preoperative angiogram is to identify any vascular anomalies about which the surgeon should be aware during surgical approach.

*Tumor Conferences are held weekly on Tuesday between 8-9 AM in Room N13E27 at the University of Maryland Hospital. This is an open meeting, and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

*E. GEORGE ELIAS* **MD**
**Professor of Surgery and Oncology**
**Director, Surgical Oncology Program**
**University of Maryland Hospital**

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## Electroconvulsive Therapy II: Present Methods of Administration

*MARK S. KOMRAD MD*

With modern anesthetic monitoring techniques, there are few absolute contraindications to ECT. It is difficult to prevent an initial sharp rise in blood pressure just after the stimulus, during the tonic phase of the seizure. Hence, conditions such as vascular aneurysms and increased intracranial pressure are examples of significant contraindications.

The advent of depolarizing muscle relaxants was a significant contribution to the safety of ECT. The primary risk prior to the use of agents such as succinylcholine were orthopedic traumas sustained during the initial intense intense tonic contraction caused by the stimulus or subsequent clonic seizures. Now, the patient is anesthetized with an ultrashort-acting barbiturate, paralyzed with a muscle relaxant, ventilated manually, and the stimulus is administered by a psychiatrist to one side of the forehead or bilaterally. The seizure lasts 30 to 90 seconds. Vital signs and EKG are monitored closely, even invasively in high-risk cases. EEG may be monitored to verify the presence of a seizure since generalized convulsions are virtually eliminated by the muscle relaxant. The patient recovers within 15 minutes and is ready to eat, as he or she has had nothing by mouth since the prior night in preparation for anesthesia. The usual treatment technique is three times weekly for a total of 8 to 15 treatments. Often there is a marked, though transient, improvement after the initial treatment; this is a good prognostic sign for subsequent response with the full course of therapy.

The risk of death is the same as with the short-acting barbiturate anesthetics, about .004 to .04 percent. The short-term risks of ECT include transient deliriums that can last a few hours after a treatment. This is more likely with bilateral stimulation than with unilateral, though unilateral often may be inadequate to induce a seizure. There is risk associated with arrhythmias, hypertension, or hypotension during acute treatment and anesthesia. Learning new information is impaired for a few weeks after the end of treatments. Also, some patients permanently lose memory for a limited interval surrounding treatment. This should be balanced against the cognitive impairment associated with depression. Many depressed patients never treated with ECT experience the same pattern of memory loss for their period of illness. Research has not consistently confirmed permanent long-term memory loss nor other neuropsychological damages. It is imperative that an explanation of these risks be balanced by an explanation of the risks of antidepressant medication (for example, cardiovascular risks can be particularly high in the elderly or in those with conduction system abnormalities) and the risk of effective disorder itself. Untreated, as many as 10 to 15 percent of those with major depression will attempt suicide.

The use of ECT may receive increased recognition in the current climate of cost consciousness. Because of the rapidity of action, the length of an inpatient stay for major depression often can be cut in half. For physically suitable patients, it can be administered in alternative settings such as a psychiatric day hospital or nursing home. Indeed, there is a trend toward returning to the outpatient administration of ECT in specialized care centers equipped for sophisticated anesthetic monitoring and staffed by nurse anesthetists, psychiatrists, and other mental health professionals. It is certainly more cost effective than inpatient hospitalization where the patient receives ECT treatment every other day. The transient cognitive limitations during a course of ECT make the effects of inpatient psychotherapy during the treatment period rather ephemeral.

The established and sometimes dramatic efficacy of ECT, its rapidity of action, its relative safety compared with other modalities of treatment, as well as its cost-effectiveness make ECT one of the most useful and beneficial treatments psychiatrists have at their disposal. Advances should be hoped for, not only in research on safety and mechanism of action but also in public and professional education about this treatment that is still so shrouded in emotional mythology.

*Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor*

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# One Minute with Diabetes

## Hyperglycemia in Type II

*Doctor, my neighbor has noninsulin-dependent diabetes like mine. Her doctor treated her for years with sulfonylurea tablets. She did not have good control of her diabetes because she did not follow the diet. Recently her doctor had her begin taking insulin plus the sulfonylurea tablets and her diabetes is doing much better. I have difficulty following my diet, too. Would I be better controlled if I took insulin plus my sulfonylurea tablets?*

Hyperglycemia in Type II (noninsulin-dependent) diabetes is mainly due to increased hepatic glucose output in the fasting state and depressed peripheral utilization of glucose in the fed state. Deficiency of insulin secretion and cellular resistance to insulin action are thought to be the reasons for the disturbance of glucose metabolism.

About 80 percent of Type II diabetes can be controlled by diet and exercise adjustments. For those patients unable to control their hyperglycemia by these methods after a few months trial, one of the sulfonylurea drugs usually is prescribed. Diabetic control can be maintained for a few years, but gradually, despite increasing the sulfonylurea drug to the maximal recommended amount, persistent hyperglycemia occurs. This is known as "secondary failure." The use of two different sulfonylureas at the same time is not pharmacologically sound because their modes of action are similar.

The use of insulin plus one of the sulfonylurea drugs has been tried since the introduction of the tablets over 30 years ago. There have been no well-controlled long-term studies to demonstrate the effectiveness of such a program, and until one is developed combined therapy remains experimental.

Probably better and more economical options would be:

1. A more vigorous trial of diet plus exercise plus sulfonylurea tablets, if needed.
2. Stopping the sulfonylurea therapy and transferring the patient to insulin therapy. With this change there is still a need for dietary management plus exercise.

***DeWITT E. DeLAWTER*** **MD**
**Editor**

Complete **Information for Authors**
about submitting manuscripts
to the *Maryland Medical Journal*
will appear quarterly (SEP/DEC/MAR/JUN)
in the meantime, please refer to
March 1988, page 219


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If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Admissions Office, (301)339-4070, The Sheppard and Enoch Pratt Hospital, 6501 North Charles Street, P.O. Box 6815, Baltimore, MD 21285-6815.




THE PERSONALITY DISORDER TREATMENT PROGRAM

**Morris S. Albert** MD has been elected chairman of the department of pediatrics of Montgomery General Hospital. A member of the hospital's medical staff since 1972, Dr. Albert graduated from Harvard College and received his medical degree from the Boston University School of Medicine. He served an internship at Bellevue Hospital and pediatric residencies at Mount Sinai Hospital in New York and at Boston City Hospital.

• • •

**William G. Armiger** MD has been elected vice-president of the Maryland Chapter American College of Surgeons, where he formerly served as secretary.

A graduate of Loyola College of Maryland and University of Maryland Medical School, Dr. Armiger did his residency training at University of Maryland Hospital and St. Agnes Hospital, both in Baltimore. His postgraduate plastic surgical training was at Strong Memorial Hospital, Rochester, NY, and head-and-neck cancer surgery and maxillofacial reconstruction training were at Roswell Park Memorial Institute in Buffalo, NY.

A member of the surgical teaching staff of University of Maryland Medical Institutions and past member of The Johns Hopkins University teaching staff, Dr. Armiger is an attending plastic surgeon at a number of hospitals in the metropolitan Baltimore and Annapolis areas.

• • •

**Henry I. Babitt** MD has been appointed Director of the Division of Cardiology of The North Charles Hospital where he has been Director of the Coronary Care Unit and Associate Chief of Cardiology. A graduate of The Jefferson Medical College, Philadelphia, Dr. Babitt completed a residency in Internal Medicine at The Jefferson Medical College and a Cardiology fellowship at the US Public Health Service Hospital, Baltimore. Dr. Babitt holds a faculty position as Instructor in Medicine at The Johns Hopkins University School of Medicine.

**Andrew Nowakowski** MD has been named chairman of the department of medicine at Fallston General Hospital.

Dr. Nowakowski received his medical degree from the State University of New York, Downstate Medical Center. He served his internship at Kings County Hospital. After completing residencies in internal medicine at Maimonides Medical Center in New York and William Beaumont General Hospital in Texas, he served a fellowship in nephrology at Walter Reed General Hospital in Washington, DC.

Dr. Nowakowski served as assistant professor of medicine at the University of Maryland School of Medicine from 1973 to 1979.

• • •

**Donald J. Roop** MD retired from the Baltimore County Health Department in January having served as its director for over 20 years. During that period, the Department grew from 100 to 650 employees, and the annual budget increased from about $2 million to $34 million. Under his tenure programs were introduced to better serve the public, and many serious health threats occurred, the latest being AIDS.

Dr. Roop graduated from the University of Maryland School of Medicine and later received an MPH from The Johns Hopkins School of Hygiene and Public Health. After interning and completing a medical residency at Mercy Hospital, Dr. Roop spent three years in the Army Air Force and then practiced in Frederick County for two years. He became Health Officer for Frederick County and later Assistant Health Officer for Baltimore County, at which time he became certified as a specialist in Preventive Medicine by the American Board of Preventive Medicine.

During his career, Dr. Roop was active in the county and state medical societies and held many offices, including president of the Baltimore County Medical Association and vice-president of Med-Chi. He was voted Doctor of the Year in 1963 by the Baltimore County Medical Association. In addition, he was appointed to several State Commissions and Boards.

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# Highlights: Executive Committee and Council Actions

### *December 17, 1987*

• **Minutes Approved** The Executive Committee approved the minutes of November 12, 1987.

• **Peer Review** Executive Director Angelo Troisi informed the committee of plans to hold a news conference on the peer review issue and reported on actions taken by the Task Force on Peer Review chaired by Dr. Michael R. Dobridge.

Norbert Picha reported that a draft study concerning the Preliminary Investigation of Physician/Health Care Fees and Patient Complaints had been submitted to the Commission on Medical Discipline. He stated that the Commission has reviewed the study and approved it in concept but has not provided a written reply. The committee approved the study as presented and the Peer Review Management Protocol after minor changes.

• **Committee on Emotional Health** The Executive Committee reviewed Med-Chi's March 12, 1987 letter to the Board of Medical Examiners concerning disparities in the law regulating social workers and the Vendorship Regulations. The Board had forwarded the letter to the Board of Social Workers, but no response has been received.

Dr. Gary Nyman, Chairman of the Emotional Health Committee, informed the committee of the alarming practice of social workers who are making diagnostic evaluations under the Vendorship Regulations. He also indicated that social workers were making independent psychiatric diagnoses and using DSM III codes for reimbursement purposes.

Following discussion, the Committee voted unanimously that a letter be sent to the Board of Medical Examiners stating the concerns of the Executive Committee in the Board's handling of the entire issue. In addition, a suggestion was made that a test case for prosecuting a social worker for the practice of medicine should be pursued.

• **Hospital Mortality Data** Michael Murray reported on the release of hospital mortality data by the Health Care Financing Administration. The Faculty has publicized its concern that release of such information could lead to unfounded conclusions about the quality of care at different hospitals.

The Maryland Hospital Association has no formal position with respect to the release of the data, although inherent data-related problems will be addressed with the press. Additionally, it was noted that the Delmarva Foundation for Medical Care, Inc. did issue a press release with its interpretation of the data.

• **Physician Identifier** The committee received a copy of correspondence sent to hospital administrators by the Maryland Hospital Association regarding Med-Chi's new unique physician identifier system. The committee also reviewed a form prepared by staff for physician chairmen of hospital utilization review committees to use when requesting the identities of individual physicians. Incidents of suspected breach of confidentiality regarding physician identities or other abuse of the identifier numbers will be reported to the Attorney General's Office.

• **Blue Cross/Blue Shield MEDCASH Program** As a matter of information, a report from MEDCASH of Blue Cross/Blue Shield of Maryland was received indicating there now will be a $350 annual individual provider's fee for this credit card. It was noted that the Faculty's Liaison Committee with Third Party Carriers reported to the Council at its September 26, 1987 meeting that the MEDCASH card is similar to other credit card systems currently in the market.

### *Executive Committee—January 14, 1988*

• **Emotional Health Committee** The Executive Committee approved a request from the Emotional Health Committee to endorse the recommendations set forth in the *Report of the Governor's Commission on the Future of State Psychiatric Hospitals*. A letter of endorsement will be sent to Governor Schaefer, Senate President Mike Miller, and House Speaker Clayton Mitchell in this regard. Recommendations include improvements in mental health services for children and adolescents, geriatric patients, as well as efforts to privatize the delivery of mental health services.

• **Legislative Update** Gerard Evans provided an update on activities associated with the Legislative Committee and briefed the Executive Committee on the anticipated impact on the peer review process of recent misperceptions in the news media.

• **National Council on Alcoholism** Michael Murray presented a summary of events leading to the planned development of a Maryland Chapter of the National Council on Alcoholism. It is within the purview of the Faculty's Committee on Alcoholism and Chemical Dependency to interact with such groups; however, the Faculty will not be a direct sponsor of the effort to establish a local chapter of this organization.

• **Attorney General's Response** For information only, the Executive Committee was provided a copy of letter of apology from Attorney General Curran in response to Med-Chi's objection to cartoons criticizing physicians recently published in the *Maryland Consumer Courier*.

• **Mutual Waiver Law** Med-Chi received a letter from Med-Mutual that indicated they would not pursue any change in the mutual waiver law during the upcoming legislative session but would support Med-Chi if we wish to pursue the matter. In his letter, Dr. Raymond M. Yow emphasized the continued cooperation of Med-Mutual in working with Med-Chi on issues of mutual concern.

• **Physicians Identifier** Joseph Jensen updated the committee regarding an article in the *Baltimore Business Journal*, January 11–18, 1988, which discussed the Med-Chi's Unique Physician Identifier System and the measures being taken by the Med-Chi to protect physician confidentiality.

• **Psychiatric Practice of Social Workers** A letter from the Board of Medical Examiners indicating this issue would be placed on the Board's agenda on January 21, 1988 was received for information.

### *Council—January 23, 1988*

• **Minutes** The minutes of the Council and Executive Committee were acted upon as follows:

Minutes approved:
Council, Saturday, November 21, 1987
Minutes accepted:
Executive Committee, December 17, 1987

• **1988 Proposed Budget** In the absence of Dr. Jose M. Yosuico, Treasurer, Joseph Harrison presented the 1988 Proposed Budget to the Council and explained that the budget deficit of $30,000 would be covered by accumulated reserves for this purpose.

A motion was made, seconded, and adopted to adjust the 1988 budget to include remuneration to the President of $30,000 for time spent away from his practice on Faculty business. The $30,000 will be paid on a monthly basis beginning February 1, 1988. This remuneration will replace the present allowance of $10,000 per year paid on a per diem basis for attending specific official functions.

The Council then voted to approve the 1988 Proposed Budget, amended to include the remuneration of $30,000 for the President. It was noted that travel expenses are excluded from this figure.

• **Emeritus Membership** The following members were approved for Emeritus Membership at the request of the component society indicated (all retired):

| | |
|---|---|
| Allegany County | James P. Hallinan MD<br>Cumberland |
| Anne Arundel County | John G. Lyons, Jr., MD<br>Annapolis |
| Baltimore City | Arthur E. Cocco MD<br>Baltimore |
| | Martin W. Donner MD<br>Baltimore |
| | Martin Helrich MD<br>Baltimore |
| | Albert Pats MD<br>Baltimore |
| | Annelies S. Zachary MD<br>Baltimore |
| Baltimore County | Fred N. Cole, Jr., MD<br>Lutherville |
| | John DeCarlo, Jr., MD<br>Towson |
| | Francis L. Grumbine MD<br>Baltimore |
| | Edward W. Hopf MD<br>Baltimore |
| | John C. Hyle MD<br>Baltimore |
| | Justinas Kudirka MD<br>Baltimore |
| | Benigno R. Lazaro MD<br>Baltimore |
| | I. Chie Lee MD<br>Hunt Valley |
| | William A. Pillsbury MD<br>Lutherville |
| | James H. Shell, Jr., MD<br>Baltimore |
| | Eva L. Zigel MD<br>Lutherville |
| Frederick County | Rex R. Martin MD<br>Frederick |
| | Thomas R. Reid MD<br>Frederick |
| | A. Earl Vivino MD<br>Walkersville |

The Council adopted a motion by Dr. George Malouf, on behalf of the Prince George's County Medical Society, to grant Emeritus Membership to Dr. Frederick E. Musser of Woodsboro, Maryland, with such membership retroactive to 1985. Dr. Musser retired from the practice of medicine in 1985 following the murder of his son.

The above names will be submitted to the House of Delegates for consideration at the 1988 Annual Meeting.

• **Commission on Medical Discipline** Nominees to fill the vacancy on the Commission created by the resignation of Dr. Robert G. Kindred were considered. Dr. Kindred's term will expire in 1990. A motion was passed to submit the following names to the Secretary of Health for consideration of appointment to fill this vacancy on the Commission:

Gaylord L. Clark, Jr., MD (ORS)
Baltimore City
John T. Lynn MD (ORS)
Prince George's County

• **Smoking Resolution** The Council approved the following Smoking Resolution as submitted:

*Resolved*, That Med-Chi will diligently apply its efforts in the area of enhancing the thrust of "education" as the center-piece of Governor William Donald Schaefer's legislative package for 1988, and

*Resolved*, That Med-Chi will cooperate with federal, state, voluntary, and private sectors to include the American Cancer Society, the American Heart Association, and the American Lung Association toward the goal of achieving a "tobacco free society by the year 2000."

• **Ethics Committee** The following ethical opinions presented by Dr. Louis Breschi, Chairman of the Professional Ethics Committee were approved by Council:

*Second Surgical Opinion* A physician who renders a second surgical opinion may be asked to assist in the surgery. While not in and of itself unethical, the situation presents great opportunity for abuse. Accordingly, a physician rendering a second surgical opinion should only assist in that surgery if no other qualified physician is available.

*Requests Involving Alternative Delivery Systems* When dealing with medical record requests from alternative delivery systems, continuity of patient care must be the physician's primary concern. In every instance, the physician must supply enough information to the alternative delivery system to allow the care of the patient to continue uninterrupted.

Likewise, requests from physicians to alternative delivery systems for patient records must be honored and handled in a similar manner. The treating physician or the medical director within the

system has the ultimate responsibility for providing these records. Physicians may charge alternative delivery systems for the transfer of medical records.

*Physician Dispensing* Physician dispensing of drugs and other medical devices can be in the patient's best interest. Physicians who dispense should dispense only to their patients and should make the following disclosures:

1. That the item is dispensed as a convenience for the patient and that the patient is not obligated to purchase the item,
2. That the item may be purchased from a pharmacy or medical supply store of the patient's choosing, and
3. The physician's charge for the item.

Physicians should include the following information on the label of each medication (excluding samples and starter doses) dispensed from their offices:

1. The name and address of the physician,
2. The date the medication is dispensed,
3. The month and year when the medication expires, if known,
4. Special handling instructions for proper storage,
5. The name and strength of the medication, and
6. Instructions for proper administration of the medication and significant interactions with other drugs or substances relevant to that patient.

The physician should keep the manufacturer's lot number on record.

*Physician/Pharmacist Code of Cooperation*—The Council accepted the Physician/Pharmacist Code of Cooperation subject to a determination of the Maryland Pharmaceutical Association as to the continuing need for such a Code. If the Pharmaceutical Association does not approve the Code of Cooperation, no further action will be taken. If the Pharmaceutical Association accepts the code, then the Professional Ethics Committee will research the accuracy of the following underlined statement "that neither physicians nor pharmacists should approach each other with respect to the completion of illegal arrangements, *such as pharmacists working as an employee of a physician.*" Then the Code of Cooperation will be resubmitted to the Council for its approval and inclusion in the *Compendium.*

• **Auxiliary** Mrs. Ching Barretto, Auxiliary President, informed Council that Maryland received the grand prize in the Southern Medical Association medical history contest. Med-Chi provided the artifacts of Dr. John Archer for display during the meeting. The grand prize was a beautiful plaque and certificate.

• **Association of Philippine Physicians in Maryland** Dr. Cesar Castillo, President of the Association of Philippine Physicians in Maryland, and Mrs. Marcia Aquino, Auxiliary President, were presented with a framed picture of the Med-Chi building in recognition of their contributions to the Med-Chi Building Fund. In making the presentation, Dr. George Malouf, Chairman of the Building Committee, thanked the Philippine Association and reminded all present that contributions may still be made to the Building Fund by other interested groups.

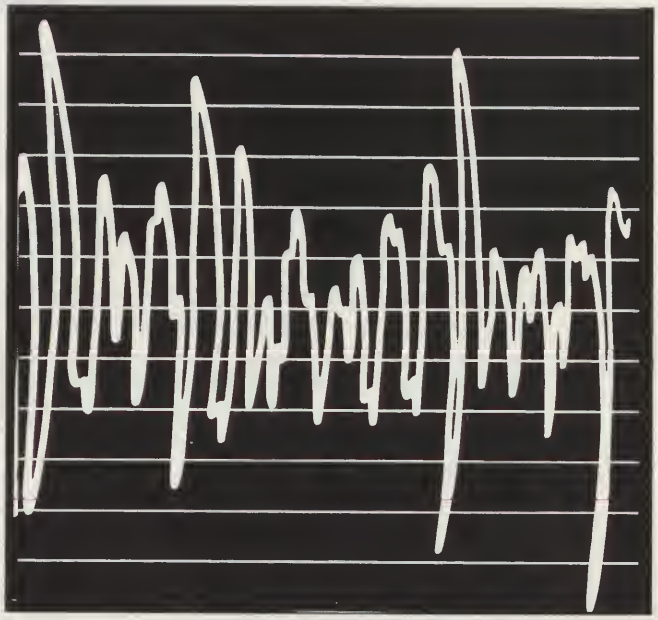
• **Peer Review Update** Dr. Dobridge reported on a number of recently published articles concerning the peer review process in Maryland and advised the Council that very intensive work in the area of peer review had been conducted over the last few months. Copies of the articles were distributed in the Council mailing.

Dr. Joseph Snyder commented about the excellent job accomplished by Dr. Leon Kassel in writing to the *Washington Post* editor, Benjamin Bradlee. Another member echoed the sentiments of Dr. Snyder, stating that Dr. Kassel and the staff should be recognized for the objectivity displayed in the letter. The attitude of the Council was that Med-Chi should be complimented on moving the issue of peer review from its initial proposal, which was that the Attorney General would assume all peer review, to the present stated position of the Governor's staff in which Med-Chi and the component societies would continue to do peer review and that all cases would be adjudicated by the new singular Board of Medical Assurance. And further, that 85 percent of the cases would remain within the purview of the physicians and the other 15 percent of the "paper cases" would be accomplished by hearing officers with final determination made by the medical board. The support for the latter proposal and the continuation of working with the Governor's staff was embraced by the Council.

• **Med-Mutual** Dr. Joseph S. Fastow expressed concern about the cost of malpractice insurance for emergency room physicians and questioned the Council as to the status of the proxies. He stated that in his own case, the amount of premium he now pays as an emergency room physician and how much that amount would increase within the next 3 to 5 years, raises grave concerns about the ability to continue to practice medicine due to these financial considerations.

Dr. Dobridge explained there has been a dramatic change in the climate between Med-Mutual and Med-Chi and the lines of communication have been opened. The composition of the Med-Mutual board of directors was discussed, particularly the need for Med-Chi's representation on the board. It was pointed out that an opportunity existed whereby the executive director of Med-Chi may be considered for an existing vacancy on the Med-Mutual Board and fulfill the responsibilities of our former executive director. Council was encouraged to submit any nominees for the board to the Executive Committee for its consideration.

• **Council Meeting Dates** Due to the decline in attendance at the Saturday Council sessions, Council considered a motion to change the meetings back to Thursday at 4 p.m. Following discussion of the motion, it was the Council's decision that this matter be placed on the agenda for further discussion at its next meeting.



# NEW FRONTIERS IN MEDICINE

*ANNUAL MEETING*

Wednesday, Thursday, Friday
April 27, 28, 29, 1988
Baltimore Convention Center

# Lunch and Learn

## Thursday, April 28—12:15 p.m.

1. **MENOPAUSE AND OSTEOPOROSIS**
   **Gay M. Guzinski MD,** Associate Professor of Obstetrics and Gynecology, University of Maryland Hospital
2. **ATHLETIC INJURIES—YESTERDAY, TODAY, TOMORROW**
   **William H.B. Howard MD,** Director, Union Memorial Sports Medicine Center
3. **PEDIATRIC AIDS**
   **John P. Johnson MD,** Director, Pediatric AIDS Clinic
4. **GEARING UP FOR RETIREMENT**
   **James S. Maffitt, Esq.,** Anderson, Coe & King
5. **LOWERING OF SERUM LIPIDS: WHEN AND HOW**
   **Simeon Margolis MD,** Professor of Medicine and Biological Chemistry, Johns Hopkins University School of Medicine
6. **LEGISLATIVE UPDATE**
   **Thomas V. "Mike" Miller, Jr.,** President of the Maryland Senate
7. **ATTENTION DEFICIT DISORDER: THE MANAGEMENT AND CONTROVERSY ABOUT A REAL PROBLEM**
   **Lawrence C. Pakula MD, FAAP,** Associate Professor of Pediatrics, Johns Hopkins University School of Medicine
8. **UPDATE ON ALZHEIMER'S DISEASE**
   **William Reichel MD,** Chairman, Department of Family Practice, Franklin Square Hospital Center, Clinical Professor, Department of Community and Family Medicine, Georgetown University School of Medicine
9. **CHLAMYDIA—CURRENT SITUATION**
   **J. Courtland Robinson MD,** Johns Hopkins Health Plan
10. **HOW TO AVOID BEING SUED—THE PLAINTIFF ATTORNEY'S VIEWPOINT**
    **Marcus Z. Shar, Esq.,** Private Law Practice
11. **DECISION MAKING IN WITHDRAWING LIFE-SUSTAINING TREATMENT**
    **Alan Sweatman MD,** Medical Director of Intensive Care, Church Hospital
12. **TREATMENT OF ISCHEMIC HEART DISEASE: ROLE OF INTERVENTIONAL CARDIOLOGY**
    **Carl L. Tommaso MD,** Director, Cardiac Catheterization Laboratory, University of Maryland Hospital
13. **INFORMATION DOCTORS MUST REPORT TO THE MVA**
    **Victoria D. Whitlock,** Director, Division of Driver Control and Records, Motor Vehicle Administration
14. **DUAL DIAGNOSIS: ADDICTIONS PATIENTS**
    Speaker to be announced

# Registration Form—Annual Meeting

## Wednesday—Friday, April 27–29, 1988
## Baltimore Convention Center

Name _____ Telephone _____ Component Soc. _____
Address _____ City _____ State _____ Zip _____

**REGISTRATION FOR MEETING** (please check appropriate line)

_____ Member of Med-Chi . . . . . NO CHARGE (includes free parking and Wednesday Lunch)
_____ Nonmember Physician (Check Category that applies)
_____ Registering for entire meeting—15 credits . . . . . $110 $ _____

_____ Apply fee to first year's dues
_____ Credit hours only (per credit hour) . . . . . $15 $ _____
_____ No CME credits, no parking, no lunch . . . . . NO CHARGE

_____ Residents and Students. _____ Apply to first year's dues . . . . . $5 $ _____

_____ Allied Health Personnel—Letter of accreditation . . . . . $30 $ _____
_____ Allied Health Personnel—No Credit . . . . . NO CHARGE

**REGISTRATION FOR MEAL FUNCTIONS**
**(Indicate number of tickets)**

_____ One ticket for light lunch, Wednesday, April 27. **Members/no charge, but reservations required.** Additional tickets-$8 each . . . . . $ _____

_____ MMPAC Cabaret, Wednesday, April 27, 5:30 p.m. Tickets: $30 each . . . . . $ _____
(Sustaining Members of MMPAC get one free ticket)

_____ Prayer Breakfast, Thursday, April 28, 7:15 a.m. Tickets: $17 each . . . . . $ _____

_____ Lunch & Learn, Thursday, April 28, 12:15 p.m. Tickets: $20 each . . . . . .

Please list 4 choices below. **See opposite page for topics** $ _____
1st _____ 2nd _____ 3rd _____ 4th _____

_____ Presidential Banquet, Thursday, April 28, 7:30 p.m. Tickets: $70 each . . . $ _____

**TOTAL AMOUNT ENCLOSED** $ _____

Return this form and a check payable to Med-Chi in the amount due to Convention Dept., Med-Chi, 1211 Cathedral St., Baltimore, MD 21201. Tickets will be held at Advance Registration Desk. No refunds for cancellations within 24 hours of event.

# Call for Papers

## Semiannual Meeting: Bermuda
## September 14–18, 1988

### Deadline for Abstracts: May 27, 1988

The Committee on Scientific Activity invites you to submit an abstract of a paper to be presented at the next Semiannual Meeting of the Medical and Chirurgical Faculty of Maryland, to be held in Bermuda.

The Semiannual Meeting attracts physicians from many different specialties, most of whom are engaged in primary care. The papers submitted should present a clinical subject of interest to a wide variety of practitioners. Each presentation will be approximately an hour long (45 minutes for presentation and 10 to 15 minutes for questions).

Send abstracts to:

Gary L. Rosenberg MD
Chairman, Semiannual Meeting
Medical and Chirurgical Faculty of Maryland
1211 Cathedral Street
Baltimore, Maryland 21201

You are encouraged to submit your abstract as soon as possible, but no later than May 27, 1988. Abstracts will be accepted on a first-come, first-served basis until all space on the program has been assigned.

Please call Patricia Munoz or JoAnn Cirillo (301-539-0872, x319 or 1-800-492-1056) for additional information on travel, hotel, and registration.


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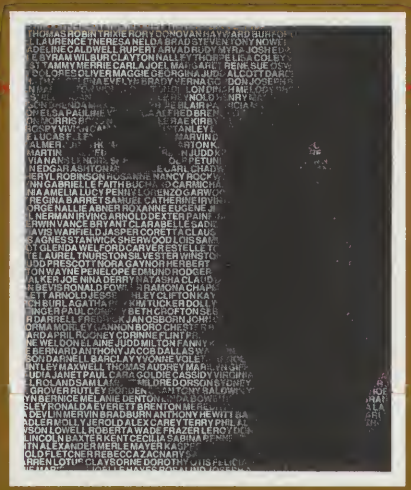
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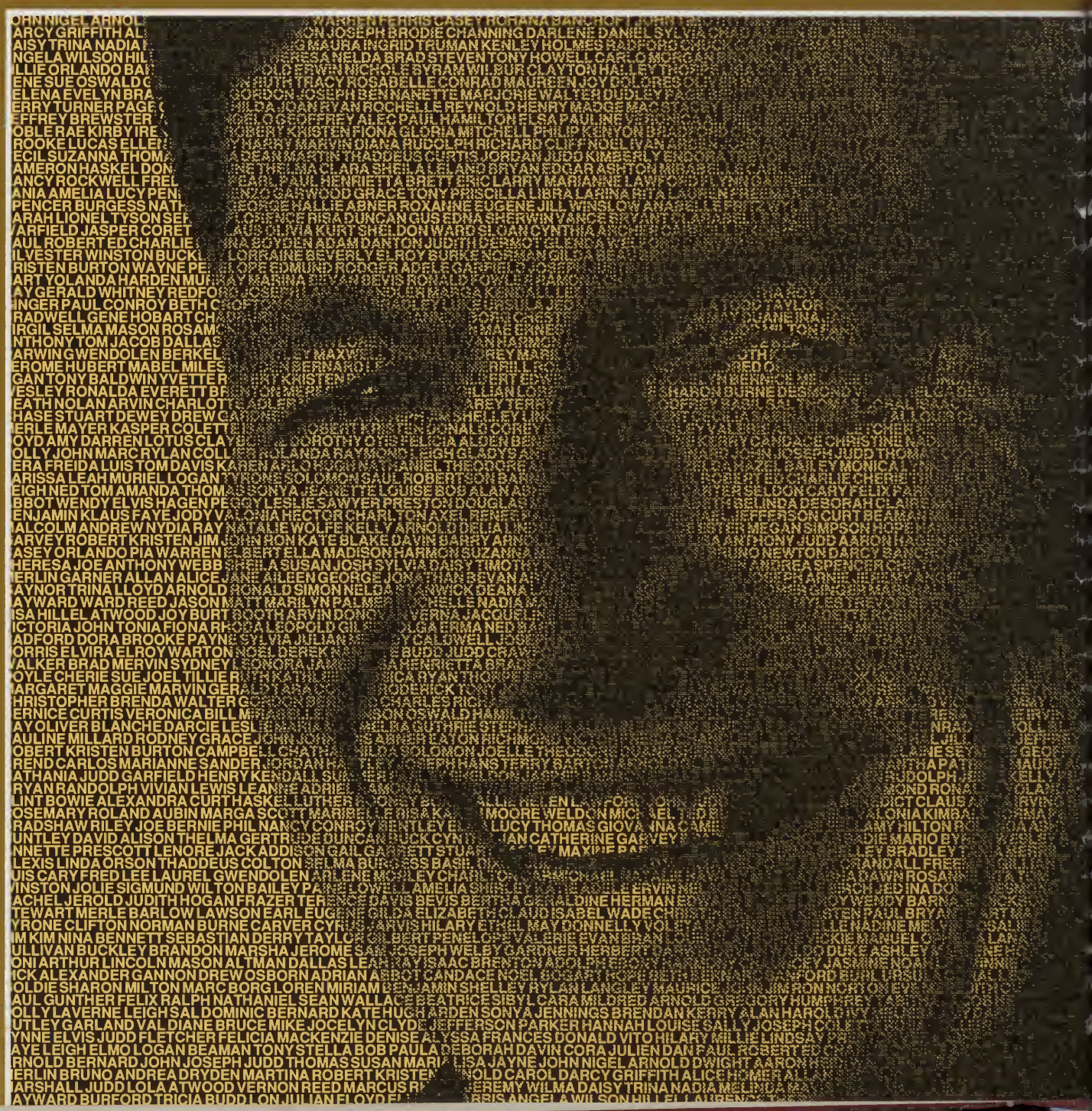
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...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

## INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

## INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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**The one you know best keeps looking better**



60 mg 80 mg 120 mg 160 mg

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

**INDERAL® LA** brand of propranolol hydrochloride **(Long Acting Capsules)**

**DESCRIPTION.** INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

**CLINICAL PHARMACOLOGY.** INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

**INDICATIONS AND USAGE. Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

**Angina Pectoris Due to Coronary Atherosclerosis:** INDERAL LA is indicated for the long-term management of patients with angina pectoris.

**Migraine:** INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

**Hypertrophic Subaortic Stenosis:** INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

**CONTRAINDICATIONS.** INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

**WARNINGS.** CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

**Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)**—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing $T_4$ and reverse $T_3$, and decreasing $T_3$.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

**PRECAUTIONS.** GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

*Aluminum hydroxide gel* greatly reduces intestinal absorption of propranolol.

*Ethanol* slows the rate of absorption of propranolol.

*Phenytoin*, *phenobarbitone*, and *rifampin* accelerate propranolol clearance.

*Chlorpromazine*, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

*Antipyrine* and *lidocaine* have reduced clearance when used concomitantly with propranolol.

*Thyroxine* may result in a lower than expected $T_3$ concentration when used concomitantly with propranolol.

*Cimetidine* decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

*Theophylline* clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS.** Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

*Cardiovascular:* Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

*Central Nervous System:* Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

*Gastrointestinal:* Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

*Allergic:* Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

*Respiratory:* Bronchospasm.

*Hematologic:* Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

*Auto-Immune:* In extremely rare instances, systemic lupus erythematosus has been reported.

*Miscellaneous:* Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

**DOSAGE AND ADMINISTRATION.** INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

**Reference:**
1. Data on file, Ayerst Laboratories.

D7295/188

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# Deafness Associated with Rocky Mountain Spotted Fever

*HARVEY J. STEINFELD MD, JANICE SILVERSTEIN BS, WILLIAM WEISBURGER MD, and FRANCINE RATTNER VMD*

**A 40-year-old female patient with severe Rocky Mountain Spotted Fever (RMSF) experienced deafness and dizziness, which proved to be of central (rather than vestibular) etiology. We theorize that this was due to central nervous system vasculitis associated with RMSF.**

A 40-year-old caucasian woman was hospitalized on June 26, 1987 with a history of seven days of malaise, headache, arthralgia and myalgia; five days of fever to 103.8°F; and a petechial rash noted on admission. She had noticed progressive hearing loss for one week before admission. Although she did not recall a tick bite, she did remove an unattached and unengorged tick from her shoulder about two weeks before the onset of illness. Acute titer for RMSF was 1:32 and convalescent titer obtained on July 9, 1987 was 1:1024.

The patient was started on IV Chloramphenical and had nephritis, liver enzyme elevation, thrombocytopenia, and mild mental confusion during her hospital course. Her cerebrospinal fluid showed 7 wbcs of which 4 were polys. CT scan of the brain was normal and, except for hearing loss, ENT exam was normal. The patient's cerebritis, hepatitis, and nephritis had raised other diagnostic possibilities, and because of gallstones found on a sonagram, Cefoperazone was added to her treatment to broaden antibiotic coverage.

She was discharged from the hospital on July 10, 1987 with significant hearing loss and dizziness, her hearing and balance having been normal before her illness.

Of note was that her dog died of RMSF three weeks before her symptoms began. (Diagnosis was confirmed by antibody titer rise and autopsy.) In dogs, early clinical signs appearing within two to three days of the tick bite are fever, anorexia, and lethargy.[1–4] Signs that may follow are lymphadenopathy, dyspnea, neurologic deficits, and gastrointestinal disturbances. Edema and hyperemia of the appendages due to systemic vasculitis often are seen. Hemorrhagic diathesis may be evidenced by petechiae, ecchymosis, epistaxis, and retinal hemorrhage. The duration of clinical disease is generally seven to ten days. Dogs may recover spontaneously, be successfully treated, or succumb. Death is often a result of cardiovascular, neurologic, or urinary system dysfunction.

Laboratory findings in affected dogs include leukocytosis, thrombocytopenia, hypoalbuminemia, and elevated serum alkaline phosphatase and cholesterol. Diagnosis is confirmed through determination of acute and convalescent titers.

This patient's clinical picture resembled classic RMSF except for the hearing loss. This loss was determined to be sensorineural, with normal Rinne and Weber tests. On July 15, 1987 (after hospital discharge), there was a "50 db hearing loss in each ear with slightly better hearing for low pitches. The understanding of speech was markedly reduced with 36 percent understanding in the right ear and 44 percent in the left" (report from ENT specialist).

After seven weeks there had been some return of hearing: on August 17, the patient reported that in the preceeding one or two days she was able to use the telephone, something she could not do before.

On August 17, an audiogram done at a different specialist's office showed bilaterally symmetrical sensorineural loss with fairly good discrimination. Loss was up to 65 to 70 db at 4000 to 8000 cps, although, if anything, the patient reported her hearing improved compared to July 15.

On September 3 an electronystatogram showed nothing indicating a peripheral vestibular problem.

## Discussion

Careful investigation revealed no obvious etiology for the patient's hearing loss except for RMSF. The patient had taken oral ampicillin prior to admission and was treated with IV chloramphenical and cefoperazone while in the hospital. None of these medications are known to be associated with hearing loss.

Hearing loss has been reported in association with RMSF. Helmick *et al.*[5] in a review of 262 cases recorded an incidence of 7 percent but failed to offer any details concerning the deafness.

Dolan *et al.*[6] reported sensorineural hearing loss in a case of RMSF that began on about the sixth day of illness and resolved between the third and fourth weeks. He reports a good prognosis for hearing loss in RMSF but does not cite a reference for this statement.

The pathology of rickettsial infection is one of a systemic vasculitis.[7–10] Within the central nervous system this vasculitis causes a multifocal encephalitis that results in both generalized and focal neurologic defects. Typically there are multiple foci of microglial and as-

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trocytic proliferation involving the cerebrum, cerebellum, and brain stem. It has been noted that the brain stem is most heavily involved by the vasculitis with formation of numerous typhus nodules.

In this case, it is likely that the vasculitis involved pathways of the eighth cranial nerve or possibly the cochlear organs causing the sensorineural hearing loss that has been demonstrated. The borderline increased number of wbcs in the spinal fluid may have reflected this vasculitis.

In conclusion, we believe that the progressive hearing loss in this patient was directly related to the pathophysiology of RMSF. The exact mechanism is still unknown but may be related to the vasculitis associated with the disease.


### Acknowledgment

We thank Joyce Richmond, Medical Librarian of the Anne Arundel General Hospital, Annapolis, for her thorough and efficient literature searches regarding this case. We also thank Dr. James Peacock for his assistance in diagnosis of this patient.


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## Commentary

### Faithful Fido Fetches Fever


*JOHN M. PLETCHER LTC, VC, USA*


Rocky Mountain Spotted Fever (RMSF) is a tick-borne rickettsial disease that affects various vertebrate species, including man's best friend. The infectious nature of the disease was first demonstrated by Howard Taylor Ricketts in 1909. He was able to show how the infectious agent (*Rickettsia rickettsii*) is maintained in nature by tick transmission between infected and uninfected animals (mainly small rodents) and by transovarial passage among ticks. Wild rodents apparently are not clinically affected but develop relatively marked rickettsemias and serve as a reservoir of infection. When an infected tick feeds on a human or a dog, severe disease can result.

Clinically, RMSF in dogs is very similar, if not identical, to that in humans. The pathogenesis centers on rickettsial-induced vascular necrosis. Multiple organs are affected producing an array of clinical signs. Typically, the skin, heart, brain, and kidney are most severely involved. The clinical signs can mimic other canine diseases such as distemper, acute ehrlichiosis, bacterial septicemia, and systemic lupus erythematosus.

Almost all cases of canine Rocky Mountain Spotted Fever occur from April to September. Fever (usually greater than 40°C), anorexia, vomiting, diarrhea, and depression are common and can occur two to three days following attachment of an infected tick. Petechial hemorrhage on the skin and mucous membranes is prominent in some cases, but retinal hemorrhages may be a more sensitive indication of the disease.

The actual incidence of clinical disease in dogs is not yet established. It is probably less common than in humans; investigators have shown that inapparent canine *R. rickettsii* infections are common. A presumptive diagnosis of RMSF can be made based upon the sea-


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sonal occurrence, tick infestation, clinical signs, and physical examination. Case fatalities can be markedly reduced with early antibiotic therapy. Tetracycline (22 mg/Kg, t.i.d.) is the treatment of choice. Chloramphenicol (20 mg/Kg orally, t.i.d.) is also effective and is indicated in puppies to avoid dental staining.

The occurrence of RMSF in humans is roughly confined to the geographic distribution of its major tick vectors. The majority of reported human (and canine) cases have been in the eastern United States. Although sporadic, RMSF incidence has increased in recent years, and the cause is uncertain. It has been noted that in many cases a pet dog in the patient's household has shown serological evidence of infection by *R. rickettsii* or actual clinical disease. This suggests that pet dogs may serve as reservoirs of infection; they also may serve as a conduit for infected ticks, carrying them into their homes. The important vectors of RMSF are three-host ticks; larval and nymph forms feed on small rodents assuring sylvatic transmission, while adult ticks feed on larger mammals including dogs and humans.

In endemic areas, one must avoid ticks to prevent the disease. This is often difficult for active people (and dogs). Pet owners living in endemic areas should be aware of the additional risk involved in keeping a dog. Rapid tick removal can be effective, but saliva, hemolymph, and feces of infected ticks contain large numbers of rickettsia and therefore are highly infectious. RMSF rickettsia are able to enter the body through intact skin or mucous membranes, so care must be taken when removing ticks.

Information concerning the seroprevalence and clinical disease in cats or other domestic species is minimal, but such animals might very well carry infected ticks into the immediate environment of people and thereby increase the risk of disease.

# Editorial

## RMSF and Litigation Fever

*JAMES G. ZIMMERLY MD, JD, MPH*

It is becoming easier to name the Maryland hospitals (and health care providers) that have *not been* involved in litigation alleging a failure to diagnose Rocky Mountain Spotted Fever than it is to name those that have. The list picks up a new hospital every year.

A few years ago, one of my 39-year-old neighbors died of the disease. Her estate's case was settled for $1.75 million. The settlement was reached after a Health Claims Arbitration panel had awarded $1.97 million to the decedent's family. The plaintiffs alleged that the health care provider failed to diagnose the disease on two visits in the face of a known tick bite, the classical rash, and the other usual presenting symptoms.

Approximately 400 cases of RMSF will be reported to the Center for Disease Control from the eastern seaboard states of Pennsylvania south to Florida each year. At the same time only ten or so cases will be reported from the Rocky Mountain States. With so few cases in the west, the index of suspicion among physicians practicing in that area may be less than that expected of us who practice in the east. We are all, however, expected to be familiar with regional diseases.

As I pen this editorial I am watching the winter Olympics being televised from Calgary, Alberta, Canada. A number of years ago I was involved in the defense of a negligence claim involving a US citizen who eventually died from RMSF in a hospital in Calgary, Alberta. The photomicrograph on the cover of this issue of *MMJ* is from that patient. The facts of his case were as follows:

A 23-year-old man from Connecticut died in the ... Hospital, Calgary, on 13 August. About ten days before he had been "bitten by ticks and mosquitoes" while hiking in Montana. He was first admitted to another Alberta hospital on 9 August with malaise, fever, arthralgia, and myalgia that had been present for two to three days. He was listless and drowsy and was treated with ampicillin 500 mg every six hours.

On the fourth day in hospital (13 August) he was found unresponsive and transferred immediately to ... Hospital. On arrival there, shortly after noon, he was comatose, had mottled skin and warm limbs. His earlobes were cyanosed, and he had petechiae on the feet and arms. He did not respond to pain. He had edema of the face and conjunctivae and hemorrhages of the

conjunctiva on the left side. His pupils were small and reacted, and his fundi had no papilledema or hemorrhage.

His respirations were gasping, his heart rate 120-140 and regular, his blood pressure 120/80, and his temperature 40° C. Laboratory studies revealed hemoglobin 14 grams, platelets 8000, white cells 13,600 with 50% bands, serum sodium 124, chlorides 82, $CO_2$ 11, K 5.2, BUN 82, blood sugar 280 mg%, creatinine 5.6, prothrombin time 14.7 (control 11). Fibrin degradation products were elevated at 40-80. Serum fibrinogen was 285. The urine contained 40-50 erythrocytes. Arterial blood gases were pH 7.31, $PCO_2$ 18, $PO_2$ 62, and bicarbonate 8—and were interpreted as metabolic acidosis and hypoxemia.

The cerebrospinal fluid contained 408 erythrocytes per cubic mm, total protein of 95, and sugar 67, but no white cells or bacteria on the smear. He was given 10 units of matched plateletes, 4 units of plasma, Solu-Cortef 250 mg, and Lasix 40 mg intravenously.

His nose bled and was packed. There were bloody secretions recovered from an endotracheal tube, but there was no other evidence of bleeding. He convulsed and died nine hours after admission.

Serologies for Rocky Mountain Spotted Fever were subsequently reported as less than 8 (negative). Proteus OX-2, OX-19, and OXK were all less than 20 (negative). Serologic tests for influenza viruses, adenovirus, herpes virus, measles, mumps, mycoplasma, rubella, para influenza 1 and 3, respiratory syncytial, cytomegalo virus, varicella zoster, and coxsackie viruses B-1, 2, 3, 4, 5, and 6, and Q fever were negative. Suckling mice inoculated intraperitoneally and intrathecally remained well and developed no lesions. Vero, Hela, and monkey kidney cells showed no cytopathic effect.

Autopsy revealed generalized congestion, edema, and some hemorrhages of the serosal surfaces and meninges, but there were no other focal lesions. The organ weights were brain 1600, heart 380, lungs 900 and 700, liver 2100, spleen 490, and kidneys 180 and 170.

The family of the decedent sued the US Park Service for alleged negligence in not posting the federal park in Montana with signs warning visitors that there were ticks present that carried RMSF. The claim was for $15 million. Not all claims from RMSF-caused deaths result in payments to the claimants. Those of you who visit my farm are hereby notified that the vector and the disease are in the grass!

**The May *MMJ*, compiled by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, will include the following articles:**

**Diabetes Mellitus & Hypertension: Public Health Perspective**
**Diabetes Mellitus & Hypertension: Clinical Perspective**
**Improving Adherence to Treatment Regimens**
**Role of Hypertension in Diabetic Renal Disease**
**Prevention of End-Stage Renal Disease: Hypertensive Therapy**
**Risk Factors for Stroke**
**The Maryland Stroke Bank**
**Alcohol & Hypertension**
**A New National Approach to Lowering Blood Cholesterol**
**Family Oriented Cardiovascular Risk Screening & Intervention**
**Hyperlipidemia: Treatment with Lipid Lowering Agents**

# Secular Changes in Case Mix of SCI Patients at Montebello

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**An estimated 10,000 spinal cord injuries occur annually in the United States, and the large majority receive inpatient rehabilitative services. We studied the case mix and management of such patients seen at Montebello Rehabilitation Hospital, comparing patients discharged with spinal cord injuries during 1986 to those discharged between 1979 and 1984 and to the national spinal cord injury database. The most recent patients were more likely to be employed and had achieved a higher level of education than earlier patients. Relatively more of them were admitted following motorcycle injuries, they suffered fewer complications (including decubiti), and they stayed a considerably shorter time.**

Spinal cord injuries (SCI), while relatively uncommon, lead to significant patient morbidity and disability. An estimated 6,000 to 10,000 new injuries occur each year, and a large majority of patients experience significant complications in the year following the event.[1,2] As the acute management of SCI has improved, leading to improved survival, rehabilitation has become a substantially more important problem, with estimates of current SCI patients approaching 200,000.[2]

Relatively few recent studies have examined the recovery of SCI patients accepted into rehabilitation programs. Woolsey found that age, marital status, and level of injury were related to outcome in a veteran population.[3] Yarkoney *et al.* studied 711 patients and found cord level and degree of paralysis predictive of outcome.[4] However, because this study comprised patients admitted to a single facility over eight years, the effects of rehabilitation may be confounded by secular changes occurring in the clinical management of SCI and by changes in health care financing over the same period. Changes in the management of bladder function, improvements in the treatment of thrombophlebitis, PPS for medicare patients, and penetration of pre-paid health plans all may have affected the outcomes reported.

To avoid the potential bias of secular changes, our study includes patients discharged in a single calendar year. It is aimed at describing the demographic and functional characteristics of the study population and delineating their medical complications and change in functional status. Whenever possible, the findings are compared with data from the same institution during the years 1979 to 1984[5] and with national data reported by the National Spinal Cord Injury Statistical Center.[6]

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This study was supported in part by Grant No. D33-PE-13000 of the Department of Health and Human Services as well as from the general funds of the Department of Epidemiology and Preventive Medicine, and the Montebello Rehabilitation Hospital.

## Materials and Methods

The study population consists of all patients discharged from Montebello Rehabilitation Hospital during 1986 for initial rehabilitation after acute SCI. This institution is a 153-bed comprehensive rehabilitation facility, accredited by the Joint Commission on Accreditation (JCAH) and the Commission on Accreditation of Rehabilitation Facilities (CARF), and is a division of the University of Maryland Medical System. Montebello has a 20-bed SCI unit that delivers multidisciplinary rehabilitation.

Of 135 patients discharged during 1986 with a diagnosis of SCI, those who had been treated in another rehabilitation center prior to their admission to Montebello or whose initial discharge was prior to 1986 were excluded from the analysis. Also excluded were patients with significant head trauma, vertebral fractures without spinal cord deficits, and spinal cord lesions with an insidious onset or relapsing course. Patients with significant head trauma in addition to spinal cord injury were excluded because their CNS problems often outweighed their spinal cord lesions, and they were usually treated on a separate head injury unit. After applying the exclusion criteria, 77 patients remained for analysis.

Functional ability was measured with a modified Barthel's Index (BI) constructed from nursing, occupational and physical therapy notes. The index is based on the ability to perform 10 activities of daily living (ADL); a higher score denotes better functional ability.[7] The item scoring was modified by assigning each activity a value of 1 if independent, and 0 if help was needed. Two items (bathing and climbing stairs), which had more than 20 percent missing values were excluded, resulting in a maximum score of 8. The scores were standardized by dividing the number of items a patient could perform independently by the number of non-missing items. To analyze functional change during

rehabilitation, the difference between initial and standardized BI score at discharge was divided by the initial score.

The patient's charts were reviewed by four authors (JS,CS,AL,RE), using a standard form. Information on demography, cause of injury, level of injury, functional ability (at admission and discharge), medical complications, length of stay, and discharge disposition was abstracted. Injuries were classified according to the standards for neurological classification of the American Spinal Injury Association.[8]

Whenever possible, the 1986 cohort and the 1979 to 1984 cohort were compared with respect to the abstracted information. The study had approximately 85 percent power to detect a twofold difference in the percent of injuries caused by motor vehicle accidents from the 1978-1984 cohort. Comparisons also were made between the 1986 cohort and the data of the National Spinal Cord Injury Data Research Center, which is based on 9,647 patients from 16 SCI Care Systems nationally between 1973 and 1985.

After abstraction, data were coded, edited, and validated. The PC version of the Statistical Analysis System (PC-SAS) was used for analysis of the data. Cross tabulation, t-tests, and summary statistics were used in describing the findings.

## Results

*Demographic characteristics* The study population had a mean age of 38 years and stayed on the average 74 days at Montebello. Eighty percent were male, and 56 percent were black; 48 percent of the entire population were black males. Two-thirds were unmarried, approximately half had completed high school, and nearly two-thirds were employed at the time of their injury.

Other demographic characteristics of the study population are presented in Table 1, which compares the patients by race. In age, sex, and education, the two groups were very similar. However, blacks were less likely to be employed (46 percent *vs.* 79 percent) and more likely to have violence as the cause of injury.

*Medical characteristics* The SCI patients experienced an average of two medical complications. The most frequent of these were anemia and urinary tract infections, which were present in more than half the patients. Psychiatric consultations were required in about half. Fewer than 10 percent developed pneumonia, heterotrophic ossification, superficial or deep thrombophlebitis, reflex sympathetic dystrophy, sepsis, or pulmonary embolism. None experienced urinary calculi or peptic ulcer disease.

The distribution of some of the clinical characteristics of the patients is shown in Table 2. Blacks and whites did not differ substantially in degree of paralysis, number of medical complications, percent achieving functional improvement, cord level at discharge, or length of stay. However, blacks were somewhat more likely to be able to walk at the time of admission. Overall, the mean standardized Barthel's Index score was 2.08 at admission and 5.06 at discharge. Three-quarters of the patients demonstrated functional improvement between admission and discharge. Distribution of Barthel's Index change is shown in Figure 1.

## Comparisons

Demographic characteristics of the study population were compared with those of the 1979-1984 Montebello patients and with some national data (Table 3). It may be observed that the SCI patient population at Montebello has changed little in age, sex, race, and marital status composition between 1979 and 1986. However, Montebello clearly serves a different patient population than that represented by the national data. The latter is considerably younger, with only 5 percent over 59

**Table 1. Demographic Characteristics of SCI Patients, by Race, 1986**

| Characteristic | Blacks N = 43 | Whites N = 33 | P-value[1] |
|---|---|---|---|
| Age | 38 | 36 | 0.6215 |
| (range in years) | (20–73) | (19–80) | |
| Sex-male | 86% | 74% | 0.168 |
| Marital status | | | |
| single | 73% | 61% | 0.383 |
| married | 22 | 36 | |
| other | 5 | 3 | |
| Occupation | | | |
| employed | 46% | 79% | 0.019 |
| homemaker | 2 | 0 | |
| unemployed | 37 | 9 | |
| retired | 10 | 12 | |
| student | 5 | 0 | |
| Education | | | |
| <8 years | 8% | 10% | 0.752 |
| elementary school | 44 | 33 | |
| high school | 46 | 48 | |
| college | 3 | 7 | |
| Cause of injury | | | |
| motor vehicle | 23% | 48% | 0.009 |
| violence | 42 | 9 | |
| sports/recreation | 2 | 12 | |
| falls/jumps | 23 | 21 | |
| other | 9 | 9 | |

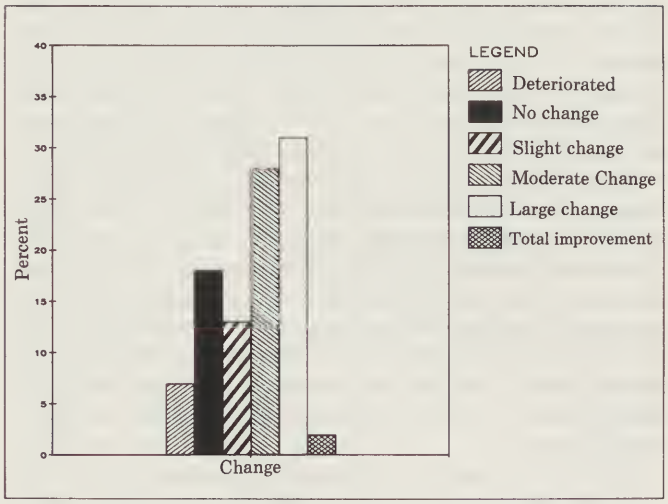
[1] Two-tailed t-test for mean age; chi-square test for homogeneity for other variables.

## Table 2. Medical Characteristics of SCI Patients, by Race, 1986

| Characteristic | Blacks N = 43 | Whites N = 33 | P-value[1] |
|---|---|---|---|
| Degree of paralysis | | | |
| paraplegic complete | 7% | 9% | 0.656 |
| paraplegic incomplete | 61 | 47 | |
| quadriplegic complete | 5 | 9 | |
| quadriplegic incomplete | 27 | 34 | |
| Ability to walk on admission | 47% | 31% | 0.177 |
| Number of medical complications (range) | 1.8 (0–4) | 1.8 (0–5) | 0.960 |
| Functional improvement during rehabilitation | 74% | 74% | 0.930 |
| Cord level on discharge | | | |
| cervical | 41% | 37% | 0.842 |
| thoracic | 35 | 42 | |
| lumbosacral | 24 | 21 | |
| Length of stay (range in days) | 75 (1–223) | 73 (9–265) | 0.889 |

[1] Two-tailed t-test for mean length of stay; chi-square test for homogeneity for other variables.

## Figure 1. Distribution of Barthel Index Change




## Table 3. Demographic Characteristics of SCI Patients, Montebello 1979–84, 1986 and National Sample 1973–1984

| Characteristic | Montebello 1979–1984 Percent | Montebello 1979–1984 (N) | Montebello 1986 Percent | Montebello 1986 (N) | National 1973–1984 Percent |
|---|---|---|---|---|---|
| Age group | | | | | |
| 0–29 | 43 | (124) | 48 | (37) | 66 |
| 30–44 | 23 | (67) | 22 | (17) | 19 |
| 45–59 | 20 | (58) | 14 | (11) | 9 |
| >59 | 14 | (29) | 16 | (12) | 5 |
| Sex (male) | 80 | (221) | 81 | (62) | 82 |
| Race (white) | 48 | (135) | 44 | (34) | 74 |
| Marital status | | | | | |
| (married) | 25 | (71) | 27 | (21) | 29[1] |
| Education | | | | | |
| <8 years | 21 | (41) | 9 | (6) | 15 |
| < high school | 42 | (82) | 40 | (27) | 28 |
| high school graduate | 33 | (65) | 47 | (32) | 34 |
| college | 4 | (8) | 4 | (3) | 23 |
| Cause of injury | | | | | |
| motor vehicle | 23 | (70) | 34 | (26) | 45 |
| motorcycle | 4 | (12) | 12 | (9) | NA[2] |
| violence | 25 | (71) | 28 | (21) | 15 |
| sports/recreation | 9 | (25) | 7 | (5) | 14 |
| falls/jumps | 20 | (57) | 22 | (17) | 21 |
| other | 22 | (65) | 9 | (9) | 3 |

[1] Data from Reference 9.
[2] Data not available.

years old, in contrast to 14 and 16 percent in the Montebello patients. There were 66 percent under age 29 in the national data compared with 43 to 48 percent at Montebello. The contrast is also substantial in respect to race; 26 percent of the national versus 52 to 56 percent at Montebello were black. The two populations were very similar in respect to the male predominance of their SCI patients and in the proportions married.

The educational level of Montebello's SCI population has increased greatly over the time span. In the 1979–1984, 21 percent of the patients had not completed elementary school; by 1986, the figure fell to 9 percent. Because the age distribution of the patients did not change, the rise in educational level is probably not due to a sudden increase in very young patients. The national sample had higher proportions of patients with both higher and lower educational levels than did Montebello.

A smaller proportion of injuries due to motor vehicles and sports/recreation and a larger proportion due to violence characterized the Montebello patients when compared with the national data base. The proportion of 1986 Montebello patients with motorcycle injuries was nearly three times greater than the 1979-1984 patients (Table 3).

The medical characteristics of the Montebello patients and the national sample are compared in Table 4. The Montebello patients had urinary tract infections and anemia more often than the national sample. Decubiti decreased by almost 50 percent at Montebello between the two surveys, with the national sample showing a rate intermediate between the two. There was also a threefold increase in the rate of anemia at Montebello between the two studies.

The pattern of cord level neurological deficits at discharge showed a smaller percent of patients with cervical cord levels, and a larger percent of patients with lumbosacral cord levels in the 1986 Montebello patients compared with the 1979–1984 Montebello patients and the national sample. Nearly half the 1986 patients were discharged on intermittent self-catheterization, a figure twice as high as for the 1979–1984 patients.

The length of stay at Montebello decreased considerably between the two studies, with a mean of 120.6 days in 1979–1984 (computed from grouped data) compared to 73.7 days in 1986. The distribution of length of stay is shown in Figure 2. Similar data for the national sample were not available.

## Discussion

The findings suggest that the types of SCI patients admitted to Montebello have changed substantially in recent years. The differences are largely in such characteristics as socioeconomic status, injury circumstances, clinical features, and length of stay.

The 1986 patients were more likely to be employed, better educated, and successfully rehabilitated in a shorter time than the 1979–1984 patients. Explanations may lie in changing eligibility rules for rehabilitation, changes in the specific subpopulation injured, and the shortening lengths of stay in the rehabilitation setting. The eligibility criteria for admissions of SCI patients have not changed in any way that can readily explain the observed changes in patient characteristics.

The circumstances of injury among the 1986 patients differed from the 1979-1984 patients in a much greater proportion with motorcycle injuries, which accounted

**Table 4. Medical Characteristics of SCI Patients, Montebello 1979–84, 1986 and National Sample 1973–1984**

| | Montebello 1979–1984 | | Montebello 1986 | | National 1973–1984 |
|---|---|---|---|---|---|
| Characteristic | Percent | (N) | Percent | (N) | Percent |
| Medical complications | | | | | |
| urinary tract infection | 59 | (169) | 62 | (48) | 49 |
| decubitus | 32 | (93) | 17 | (13) | 23 |
| anemia | 24 | (70) | 77 | (59) | 11 |
| Cord level at discharge | | | | | |
| cervical | 47 | (129) | 39 | (30) | 53 |
| thoracic | 41 | (113) | 39 | (30) | 37 |
| lumbosacral | 35 | (126) | 22 | (17) | 10 |
| Length of stay | | | | | |
| 0–90 days | 53 | (153) | 70 | (54) | NA[1] |
| 91–180 days | 31 | (88) | 26 | (20) | |
| 181 or more | 16 | (47) | 3 | (4) | |

[1] Data on length of stay not available.

for 12 percent of the SCI patients. It is possible that motorcycle-related injured patients are more likely to survive their initial trauma and to require rehabilitation. Alternatively, perhaps more people are riding motorcycles, with a resulting increase in spinal cord injuries. Presumably the lack of safety helmet laws would result in lower proportions of motorcycle-related injured patients surviving. It is possible that a secular decrease in other causes has artificially inflated the proportion of motorcycle-related injuries.

It is also notable that the national sample had half as many injuries from violent causes as the Montebello series. This probably reflects the characteristics of the predominantly urban environment of the Montebello patients. While only half the Montebello patients came from Baltimore City, 90 percent of the gunshot injured patients originated there.

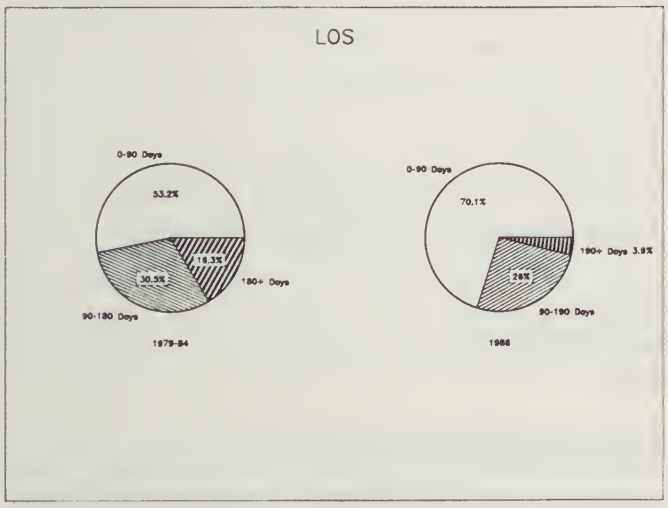
From the data it is apparent that more lumbosacral-injured patients were discharged from Montebello in 1986 than in the early period. Inherent differences in complication experiences and management may explain some of the observed contrasts between the 1986 and earlier Montebello patients. The 1986 patients used intermittent self-catheterization substantially more often, which could be correlated with changes in the level of injury, although the actual difference in cord level was probably not large enough to confirm this. It is likely that the Montebello staff more frequently instructs their spinal cord injured patients in the use of this procedure than previously.

Although there were no secular differences in most medical complications, the frequency of anemia and decubiti did change substantially. There was a surprisingly high prevalence of anemia in the 1986 patients as compared with the earlier ones: 75 percent of them had anemia diagnosed at some time during their admission, compared with 24 percent in the 1979–1984 patients and 11 percent in the national data sample. Several explanations seem plausible. Shorter acute hospitalizations may result in the admission of patients to rehabilitation facilities before full hematologic recovery from injury and surgery. Alternatively, the differences may be artifactual, due to differences in ascertainment of anemia between studies: while the cutoff levels for the laboratory diagnosis of anemia was the same in both Montebello studies (hemoglobin <12 mg percent for females and <14 mg percent for males), laboratory diagnosis at any point during the hospitalization was considered anemia in this study, while it is not known whether this was the case in the previous study. Since, with the exception of anemia, the two Montebello cohorts experienced similar rates of other complications, the possibility of an artifact here is plausible.

The analysis revealed a significant reduction in the prevalence of decubiti between the 1979-1984 and 1986 patients at Montebello. This may be due to improvements in nursing care and rehabilitation therapies at Montebello. It also may be associated with the secular trend of a decrease in length of stay both acutely and during rehabilitation over this time. Patients undergoing active rehabilitation earlier in their clinical course may be less likely to develop decubiti.

No analysis of rehabilitation costs was carried out. It is likely, however, that average cost per patient has decreased at Montebello because of the marked reduction in length of stay in recent years. Efforts to assess long-term outcome after rehabilitation would be difficult but are important.

**Figure 2. Distribution of Length of Stay**




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# History of Nonpenetrating Chest Trauma and Its Treatment

*ROBERT B. WAGNER MD and BENJAMEN SLIVKO MD*

**Given modern medicine's dependence on technology in the diagnosis and treatment of nonpenetrating chest trauma, we derive considerable appreciation of and admiration for our surgical predecessors' knowledge of rational treatment of nonpenetrating lung injury that evolved *before* the development of x-ray.**

Although the ancients were aware of the danger of nonpenetrating chest injuries, most of their attention focused on the more obvious and dramatic penetrating wounds. Hippocrates writes of hemoptysis subsequent to broken ribs and notes the association of pleurisy and empyema, especially when the chest wall was contused. Treatment of this more serious injury included reduced diet, rest, avoidance of sexual intercourse, silence, and "to OPEN A VEIN AT THE ELBOW." Bleeding was followed obsequiously until the second half of the nineteenth century. The chest was dressed firmly with linen,[1] the mainstay of the treatment of fractured ribs for centuries.

The next authoritative word concerning severe nonpenetrating chest trauma comes to us from *The Surgery of Theodoric*, circa A.D. 1267.[2] Theodoric was the putative son of Hugo of the Borgognoni family.[3] Both Hugo and Theodoric are best known for recognizing that wound suppuration was neither necessary nor desirable. When discussing rib fractures, Theodoric noted two types, one that points outward, the other inward. He treated the fracture that pointed outward by reducing it manually, covering the area with a suitable medication, and binding the fracture tightly.

Guy de Chauliac of Avignon, frequently known as the "Father of Surgery,"[4] completed his famous *Chirurgia Magna* in 1365. He speaks of himself as "Physicus," since the title of "doctor" was not then conferred in the faculty of medicine in the universities. The *Surgery* was a principal didactic surgical text to the eighteenth century. Guy de Chauliac marveled[3] that so little concerning chest wounds had been written by Galen, Haly Abbas, and Avicenna. Most of what he wrote about chest wounds concerned penetrating wounds, although he did differentiate between penetrating and nonpenetrating wounds. In treating the nonpenetrating chest wound, he described his particular crosswise bandages.

A middle English translation (circa 1550)[5] of John de Vigo's *Practica Copiosa in Arter Chirurgia* allows considerable insight into the knowledge of the day (1514). It appears that little had changed from the times of Hippocrates in that diagnosis was based on palpation of the fracture site: "sometimes there is heard a cracking of the fracture." He wrote "there followeth sometime a disease called pleurisy, coughing, spitting of blood, and a great fever, and this fracture is judged by all DOCTORS to be very dangerous as it like in signs, causes and cure, unto fractures of the bones of the breast."[5] Note that the honorific, DOCTOR, was in use.

The most famous surgeon of the sixteenth century, Ambriose Pare (1510–1590), is best known for recognizing that gunshot wounds treated without burning oils and cautery did better than those wounds so treated. He was personal physician to four consecutive French kings: Henry II, Francis II, Charles IX, and Henry III. Although he was one of the first surgeons to write in the vernacular (French), his Opus was translated into Latin in 1582 and into English in 1634 by the apothecary Thomas Johnson.[6] In his discussion of rib fractures in cases associated with difficulty in breathing, spitting of blood, cough, and fever, he stated that "the only way to deliver the patient from danger of imminent death, is to make incision on that part, where the rib is broken, so that laying it bare, you may discern the pricking fragments and take them out." He noted that diet, purgatives, and phlebotomy are not particularly necessary in simple fractures but are in complicated fractures.

The armamentarium of the seventeenth century surgeon has been amply and wonderfully relayed to us through the writings and illustrations of Johannes Scultetus, translated into English in 1674.[7] Scultetus demonstrated the irrigation syringe and cannulae used in thoracentesis for the empyema resulting from penetrating wounds of the thorax and from "more vehement accidents."

## The Eighteenth Century

In 1707 a fascinating treatise was published in Amsterdam by a military surgeon, Dominique Anel, entitled *The Art of Sucking Wounds.*[8] He observed that professional wound suckers, who had been illustrated vividly by Scultetus (Figure 1), were unreliable because they frequently were incapacitated by oral infections. Therefore, he successfully adapted a large syringe to the many shaped funneled cannulae used by wound suckers. When asked to treat a through and through sword wound of the chest, he applied a blunt-ended, side-holed cannula to his syringe, inserted it into the chest, successfully aspirated the air from the chest, and sutured the wound (Figure 2). Although he reported that the lungs sealed in several days, he clearly was

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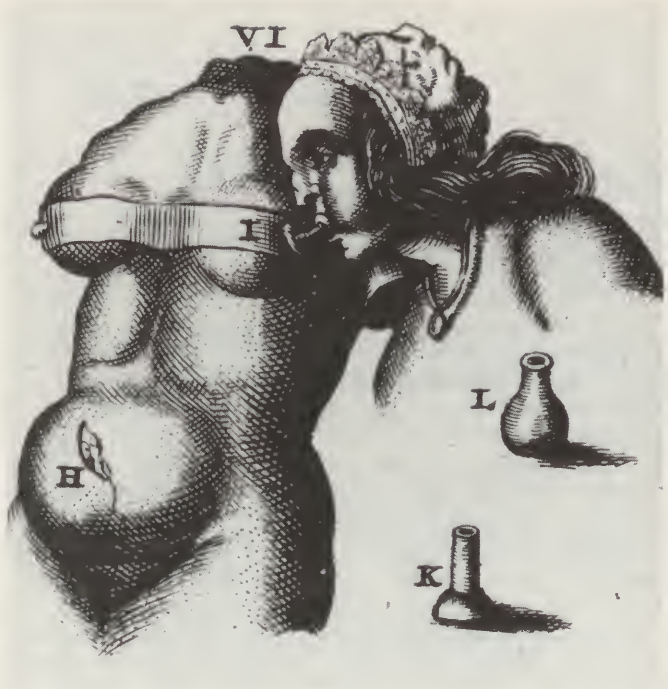



**Figure 1.** Wound sucker. Employed by physicians and surgeons until the mid-nineteenth century to suck out hematomas, fluids, or pus. In the military, this procedure frequently was performed by the drum major or other noncombatants. Illustrated by Scultetus.

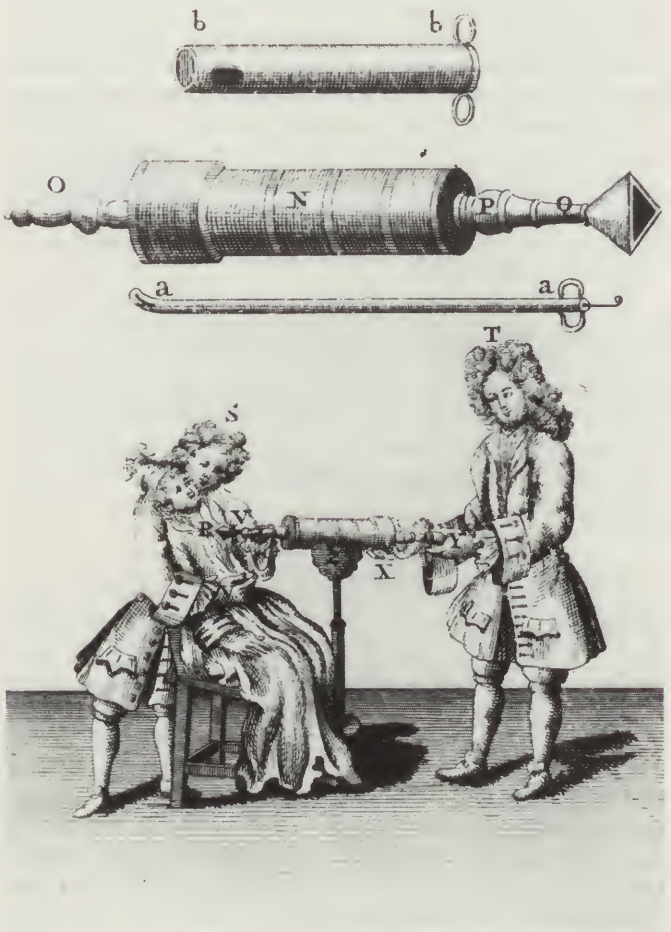



**Figure 2.** The syringe of Dominique Anel. Considered to be the prototype of the modern syringe.

more interested in demonstrating the adaptability of his syringe than in the appreciation of the principle of treatment of the pneumothorax.

The principle of aspiration, however, was not lost on Boerhaave of Leyden, "the second Hippocrates," who, in his aphorisms[9] published by his famous pupil, Gerard Van Swieten, noted that hemothorax should be treated by sucking the extravasated blood through a flexible tube with holes in the sides and obtuse at the end (Figure 3).

In 1713 Jean Mery, whose most important contribution to surgery was his resection in 1701 of several feet of gangrenous bowel and creation of an artificial anus with survival,[10] reported on a 60-year-old man who was run over by a carriage wheel and suffered fractures of the left fourth and fifth ribs. The patient rapidly developed massive subcutaneous emphysema and died four days later. At autopsy Mery discovered an almost imperceptible opening between the intercostal muscles that allowed the air from the lung, which had been lacerated by a splinter of broken rib, to enter the subcutaneous tissue thus causing the massive subcutaneous emphysema.[11]

In 1740 Daniel Hoffman reported the plight of a young husbandman (farmer) "whose chest was struck by a plough, as to break a rib, upon which an emphysema came on, should, as often as ever he drew in the air," have "a tumor, of the bigness of a hen's egg, protuberating in the region of the broken rib; which tumor receded soon after expiration." This description is almost certainly that of a flail chest. The patient recovered "as he was a young man of robust constitution."[12] Thus, very early, it was recognized that youth benefits prognosis in cases of flail chest.

Additional beautiful illustrations of surgical instruments are to be seen in Laurence Heister's (1757) *General Systems of Surgery.*[13] The professor of Physic and Surgery at the University of Helmstedt, in discussing the use of the trochar for drainage of empyema, passed on the still-useful admonition, "But as lungs, which frequently adhere to the pleura, may be by that (use of the trochar) means injured, the following method is always preferred by the CAUTIOUS AND PRUDENT surgeon." He then described carefully dividing the intercostal muscles: "a sufficient opening is made into the thorax, the finger is then introduced, in order to separate the lungs from its adhesions to the pleura, and to make way for the peccant humors."

The epochal year in pathological anatomy was 1761, the date of publication of Giovanni Battista Morgagni's *De Sedibus et Causis Morborum per Anatomen Indagatis* (The Seats and Causes of Diseases Investigated by Anatomy), published when he was 79.[14] In this work, one of the most important in the history of medicine,

Morgagni devoted a chapter to thoracic trauma, referring to all known previously published cases he believed of value. In the section devoted to nonpenetrating injuries, he described two cases of lung injury without rib fracture. In one, a man fell from his horse and was trampled. After blood lettings, and "other proper remedies" externally and internally, the man died on the fifteenth day. "No rib was found to be broken in by the dissection: but betwixt the ribs and the pleura was a tumor of considerable size, made up of congested blood, as it were: and there was *a disease in the lungs* which corresponded thereto." It is this "disease in the lungs" that has been referred to by numerous authors as the first description of a pulmonary contusion. In retrospect, this lesion was not what we today would call a contusion, at least, not an uncomplicated contusion, as the usual contusion would not have been present 15 days after the original injury. It may have been a superimposed pneumonia or perhaps a pulmonary hematoma. The word contusion was not used in describing this lung injury by Morgagni, who was familiar with the term and used it in describing other forms of trauma.

Morgagni's second case of lung injury without fracture is that of a 10-year-old country lad run over by the wheels of a cart. He expired in an hour. At autopsy extravasated blood was found in the thorax, "and some ribs depressed and broken on the left side; and, on the right side, I found the inferior lobe of the lungs torn away from the back; that is to say, open'd with a large and deep hiatus, in a longitudinal direction." Here he clearly described a pulmonary laceration. Morgagni then likened this injury to the great injuries found within the head from the effect of blows on the opposite side, that is, contrecoup injuries. He suggested a mechanism other than perforation by a rib as a cause of the pulmonary laceration; that of a sudden compression striking a blood-and-air-filled viscus, thereby forcing it against the opposite ribs.[14]

The years between 1767 and 1795 were filled with a most curious literature on the subject of treatment of emphysema, the word most commonly used for pneumothorax. In 1707 Anel had published his experience in aspirating traumatic pneumothorax with a syringe and side-holed cannula. However, this knowledge apparently was unknown to the surgeons of Great Britain, as suggested in a paper read by William Hunter for his protege, William Hewson, to the Society of Hospital Physicians. Entitled "*The Operation of Paracentesis Thoracis, Proposed for Air in the Chest, with Some Remarks on the Emphysema, and on Wounds of the Lungs in General,*"[15] it created a tremendous stir concerning claims of priority for this discovery.

When word of this paper reached Alexander Monro,

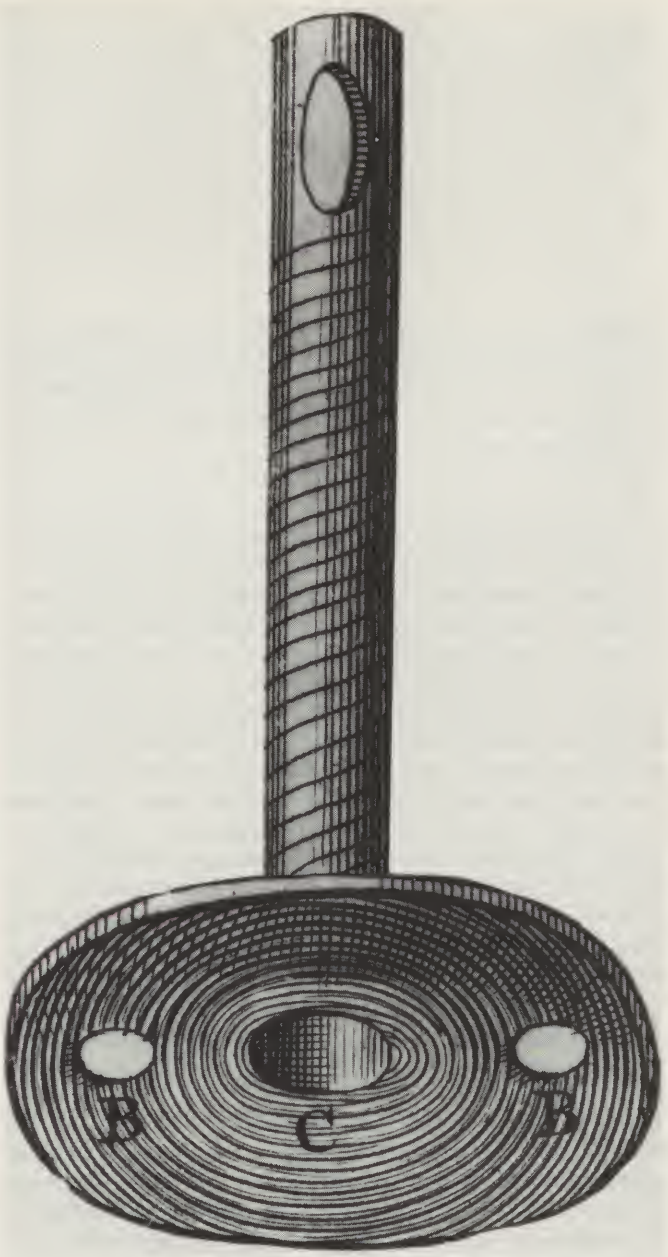


**Figure 3.** A flexible, metal, blunt-tipped cannula inserted within the thorax to drain empyema. Illustrated by Heister.

Secundus, professor of Physic and Anatomy at the University of Edinburgh, he promptly wrote a book entitled *A State of Facts Concerning the First Proposal of Performing the Paracenetesis of the Thorax, on Account of Air Effused from the Lung into the Cavities of the Pleurae and Concerning the Discovery of the Lymphatic Valvular Absorbent System of Vessels in Oviparous Animals. In Answer to Mr. Hewson.*[16] This 1770 monograph contained several interesting facts: Mr. Hewson was a student under Monro when the latter proposed thoracentesis for traumatic emphysema after observing a case of tension pneumothorax autopsied by Meckel in Berlin in 1757. Monro also claimed priority for the discovery of lacteal and lymphatic vessels in oviparous animals. One of the more interesting aspects of their battle (aside from the fact that neither had a true claim to the "invention") was that during the years of the argument neither man had ever performed the

procedure on a living patient. Hewson died at the untimely age of 35 as a result of a wound received in dissection. He has been credited with the discovery of the role of "coagulable lymph," now called fibrinogen, in coagulation.[17]

In 1773 a new claimant, William Bromfield of London, proposed his priority for having performed the first thoracentesis for traumatic pneumothorax.[18] Morgagni[14] called him the most experienced surgeon of England. Bromfield wrote an almost apologetic claim stating that when Mr. Hewson had shown him the paper proposing paracentesis thoracis for relief of "emphysema," Bromfield told Hewson that in his surgical lectures he had pointed out that incision was the only method of relief. Bromfield then stated that he was not a little surprised, as will be every professor of surgery, who has read at all, to find that two gentlemen, eminent as teachers of anatomy, should enter into a paper war about a discovery that was made "long before they were born." Bromfield also discussed having observed a patient who reexpanded his lung in an accelerated manner by playing on the hautbois (the oboe), thus, the first description of an incentive spirometer.[18]

In the first book (pamphlet)[19] written on Surgery in the United States (1775 and 1795, the latter published posthumously), John Jones of New York and later Philadelphia, stated that the only method capable of affording effectual relief to air within the cavity of the thorax after trauma is to perform the operation of paracentesis thoracis. Jones's *Plain, Concise, Practical Remarks on the Treatment of Wounds and Fractures* became the manual of Continental surgeons during the Revolutionary War.

Dr. Jones was the intimate friend and physician to Benjamin Franklin and attended him in his last illness. He also successfully attended George Washington while the latter was president and remained physician to Washington and his family until Jones's death in 1791.[20–22]

John Abernethy, a student of John Hunter's, pointed out that subcutaneous emphysema is the result of injury or tear of the lung (1793). In such cases he advised incision of the skin to permit the entrance of air, to collapse the lung in order to prevent further leakage of air, and to facilitate healing of the fractured lung tissue by allowing it to remain motionless.[23] Here he anticipated some of the observations of Carson and Forlanini by suggesting artificial pneumothorax to heal pulmonary lesions.[24]

In 1795 John Bell of Endinburgh wrote an excellent book, *Discourses on the Nature and Cure of Wounds.* Bell, brother of the "now" famous Sir Charles Bell, was in his own right a prominent surgeon. John Bell chastised Benjamin Bell for having proposed to treat pneumothorax by aspirating the air using suction from an elastic gum bottle (bulb syringe)[25] for fear that reexpansion of the lung would cause a lung injury to bleed. This fear persisted until the Second World War.

## The Nineteenth Century

In 1803 Itard, physician to the Paris Institute for deaf mutes, gave a dissertation on and named what is now known as pneumothorax. His patients all had tuberculosis.[26] William Cullen, a colleague of Monro Primus and Monro Secundus, had previously proposed the name "pneumatosis" to replace the then accepted term emphysema.[27] "Pneumothorax" received support from Laennec in his works[28] and thereafter became generally accepted.

*Observations on Emphysema*, by Andrew Halliday,[27] consolidated most of the knowledge concerning pneumothorax at the time of its publication in 1807. It also continued the dispute over claims for priority in thoracentesis for pneumothorax in favor of Monro. Multiple examples of pneumothorax are described in Halliday's text including seven cases of nonpenetrating trauma. Among these is one by Monro that contains an excellent description of flail chest.

The year 1819 witnessed the publication of *Auscultation Mediate* by Rene-Theophile-Hyacinthe Laennec,[28] describing his experience with his invention, the stethoscope. This monumental advance eventually helped physical diagnosis to become a highly refined art.

The first use of the term "pulmonary contusion" was apparently by the outstanding surgeon of his day, Guillaume Dupuytren, of the Hotel Dieu.[29] Although his works were published posthumously (1839) by his students Paillard and Marx, it is clear that Dupuytren had given considerable attention to the subject of nonpenetrating injuries to the chest. He classified contusions as (1) injuries to the chest wall and (2) contusions of the lung, further defined as (*a*) mild injuries to the lung that ordinarily resolve and (*b*) more serious contusions in which the lung is not only torn, but disorganized. Blood escapes through the mouth, hemothorax is present, and these patients die within a few hours.

In a work published earlier (1833) than Paillard and Marx's (but perhaps proposed later), J. Jobert, surgeon of the hospital of Saint-Louis of Paris, also classified pulmonary contusions on the basis of degrees of severity, in a way that is remarkably similar to Dupuytren's. In his monograph, *Plaies D'armes a Feu* (Gunshot Wounds of the Chest), he devoted a great deal of consideration to nonpenetrating chest wounds. He noted that the lung is sometimes injured by projectiles acting indirectly, such as spent (cannon) ball causing

concussion to the lung. Jobert proposed three classes of severity of injury:

- First degree contusion, slight, limited to ecchymosis caused by an infiltrate of blood
- Second degree contusion, the blood forms a pocket (hematoma) indicating that the organ was torn
- Third degree contusion, the texture of the lung is greatly altered

The lacerations extend beyond the parenchyma to the veins, capillaries, bronchi, and large vessels. The causes are variable, both direct and indirect.[30]

During the remainder of the century, multiple case reports of lung injury were published in many countries. A purview of these autopsy findings on patients dying from nonpenetrating chest trauma prior to the development of rational therapy and x-ray reveals that the primary injury of the lung was recognized as pulmonary laceration. Several of these papers stand out as classics in clear, concise medical thinking. Among these are the papers of Gosselin,[31] Litten,[32] and the monograph of Guthrie, *Wounds and Injuries of the Chest* (1848).[33]

In 1846 Gosselin of Paris published a paper, "Research on the Tears of the Lung," in which he described in exquisite detail the clinical findings by auscultation and percussion in two young patients who had suffered nonpenetrating lung injuries.[31] He convincingly described the findings consistent with a pulmonary laceration and then logically proposed his theory that the patients' lungs ruptured because they must have closed their larynx instinctively at the moment of impact. Therefore, the lungs burst like a bladder, which when squeezed in the middle burst in the edge. He noted the lung rupture may extend to the visceral pleura and communicate with the pleura or may be contained within the lung. Incidentally, both patients survived their injury and their treatment, which consisted primarily of bleeding.

Of some interest to us is Gosselin's notation that Hewson's proposal of paracentesis thoracis for pneumothorax had been abandoned. This can be understood considering that the antiseptic method of performing surgical procedures was as yet unknown and the the procedure of thoracentesis carried an exceedingly high mortality rate. It is said that Dupuytren had performed the procedure 50 times with 48 deaths.[33] It is no wonder that when Dupuytren developed empyema, he refused thoracentesis, saying he would rather die by the hand of God than by that of surgeons.[11,33]

G. J. Guthrie related interesting and colorful insights into combat in *Wounds and Injuries of the Chest* (1848).[33] He then noted the pulmonary complications of nonpenetrating chest trauma, specifically mentioning pleurisy, pneumonia, and when giving examples of cases quoted from William Stokes, the case of a middle-aged man who died of a lung abscess following blunt chest trauma.

In 1859, Charles Hunter of London modified by beveling the point of the hypodermic needle (recently invented by Charles-G. Pravaz[34] of Lyon) so that it no longer needed to be introduced through the "awsome trochar."[35,36] This technical improvement allowed for more rapid acceptance of the procedure by the medical profession and, presumably, the patients. Aspirating syringes using stopcocks were designed by the French to prevent air from entering the pleural cavity during aspiration.[36]

In 1882 Litten published an exemplary article, "Contusion Pneumonia," wherein he described three types of pulmonary injury in blunt trauma. He wrote that the lung may have superficial ecchymoses, hemorrhagic infiltrates, or that the injury may cause bloody apoplexy of the lung (pulmonary hematoma). This lesion may lead to gangrene or abscess formation. The tearing of the lung and pleura does not have to conform to the site of injury, and can occur without noticeable injury to the chest wall. He believed that if the lung were compressed it would give, like a solid body, and tear. Clinically, severe hemoptysis indicated a large tear. Finally, he differentiated between "contusion pneumonia" which he believed to be a secondary infection on an injured lung, as opposed to "traumatic pneumonia," a pneumonia caused primarily by injury, such as a penetrating injury.[32] In the first English textbook (1896) exclusively on thoracic surgery, London surgeon Stephen Paget devoted a full chapter to nonpenetrating chest injuries, noting that injuries of the lung are not, in most cases, due to direct driving inward of the fragments of the bone into the lung. "As a rule, any deep laceration in simple fracture of the ribs is due to the violence that broke the ribs, not to the actual entry of the sharp fragments into the lung."[37]

Following the introduction of anesthesia and asepsis in the second half of the nineteenth century, surgery made tremendous advances. Abdominal surgery became commonplace, and a few bold surgeons were operating on the chest. According to Le Boutillier, the first reported thoracotomy to repair a lung lacerated by a rib was performed with cure by a German surgeon, Kofstein, in 1898.[38] The major hurdles for safe thoracic surgery yet to be overcome were control of pneumothorax when the chest was opened, control of anesthesia, and drainage of the chest. Roentgen's discovery of x-ray in 1895, an invaluable help in diagnosis and therapy, had its great development in the twentieth century.

Drainage of the thorax had been performed for empyema since Hippocrates. Reeds, various shaped metal cannulas, and flexible metal cannulas were widely

known. Van Swieten, who would later be called to Vienna by Empress Maria Theresa to reform the school of medicine,[17,39] had recommended evacuating traumatic hemothorax through a blunt-tipped flexible tube perforated laterally with suction applied.[9] M.L. Baudens, a young French military surgeon in Algeria, in 1830 used a rubber uretheral catheter and a bulb syringe to evacuate a traumatic hemothorax but put the catheter only through the soft tissues and not into the thorax. Nevertheless, he successfully treated his patient who had been shot through the chest.[40] A bold and brilliant surgeon, Baudens during this same campaign successfully repaired a gunshot wound of the intestine by a laparotomy, the first in history.[10]

Hillier (1867) of England[41] used a long narrow tube with its free end under water to drain an empyema, and W.S. Playfair, an obstetrician and pediatrician (a common combination of the day), reported in 1872 his method of underwater drainage for the treatment of empyema.[42] This system was much like today's one-bottle system, except it was completely closed so air could not enter or escape (Figure 4). Trochars connected to a rubber tube placed under water were by then a common procedure. F. Cresswell Hewett, another Englishman, in 1876 described exactly the same underwater drainage system, but the bottle was filled with a "weak antiseptic solution" and was to be raised and lowered so as to irrigate the empyema cavity.[43] In 1893 Von Braman advocated that a rubber tube with a valve over the end be placed in the soft tissues to drain the air in massive subcutaneous emphysema.[44] McDonnell had in 1864 described using a "membrane" over the end of a trochar to prevent the ingress of air when tapping a traumatically induced hemopneumothorax.[45]




**Figure 4.** Playfair's drainage for empyema. Small rubber tube with the fluid collected in a simple closed bottle.

## The Twentieth Century

"Acute pneumothorax has been the stumbling block for almost a century to the proper development of surgery of the chest," said New York pioneer thoracic surgeon Willy Meyer in his 1919 review of the evolution of thoracic surgery.[46] The physiology of pneumothorax had been studied experimentally for over 100 years, beginning with Van Sweitin and William Hewson. Complete understanding, although slow to come, was finally achieved with Evarts Graham and Richard Bell's studies initiated during their work for the Empyema Commission of World War I.[47] Empirically, however, Playfair's underwater drainage had been improved by James Kenyon of Babies Hospital of New York (Figure 5). With the addition of an air escape tube, he created the modern one-bottle underwater drainage system[48] that was used by Kenyon to treat a child whose chest was crushed.[49,50] "That the airtight introduction of the drainage method proved almost like magic. From the moment it was in place the boy began to recover."[50]

The concept of pulmonary insufflation as the mechanism for operating within the thoracic cavity occurred to many observers beginning in the eighteenth century and was based on resuscitative maneuvers for drowning. The history of intralaryngeal insufflation was described in a series of articles by Rudolph Matas in 1900. He credited no one individual but recognized the great merit in pulmonary insufflation for intrathoracic surgery. At the time of his article, the Fell-O'Dwyer apparatus was being used in the Charity Hospital of New Orleans. The device was a bellows attached to a tube with a preshaped metalic graduated glottic conical tip that was inserted tightly into the larynx. Even the visionary Dr. Matas believed that intralaryngeal tamponade rarely would be required.[51] (The history of intratracheal intubation was elegantly reviewed by Ravitch in 1982.[52])

In 1909 Meltzer and Auer reported from the Rockefeller Institute their experimental work, which began the modern era for intratracheal respiration.[53] In 1910 Ellsberg reported "The First Case of Thoracotomy in a Human Being under Anesthesia by Intratracheal Insufflation" in which he administered anesthesia for Howard Lilienthal of Mt. Sinai Hospital of New York.[54]

The same year saw the publication of a description and photograph of a cuffed endotracheal tube identical to those used today[55] (Trendelenburg had cuffed the tracheostomy tube in 1871[24]). In the article "On the Treatment of Traumatic Injuries of the Lungs and Pleurae," Philadelphia surgeon George Dorrance included the following brief notation: "I have used the cannula in 3 cases of respiratory failure, with very satisfactory results." His work, which was far ahead of its time, seems to have been completely ignored.

The knowledge necessary for preserving respiratory function during intrathoracic surgical procedures had evolved, and the technique for applying these methods had been perfected before World War I. Nevertheless, use of this knowledge was glaringly absent in that war. Richard Meade, with his encyclopedic knowledge and insight into the history of thoracic surgery, attributed this to "emotion and the prestige of a name in surgery."[56]

With the exception of the Parisian surgeon, Pierre DuVal, Moynihan of the British army, and a few others, thoracic surgery in World War I was undertaken primarily to protect the pleura.[56,57] DuVal's indications for surgery were extremely liberal, suturing gunshot wounds of the lung while demeaning the use of positive pressure.

Satisfactory x-ray films of the thorax were not available until William David Coolidge's 1913 to 1917 invention of the hot cathode tube, which made examination of the lung parenchyma feasible by allowing control of both the intensity (ma) and the penetrating power (kvp) of the x-rays produced.[58,59]

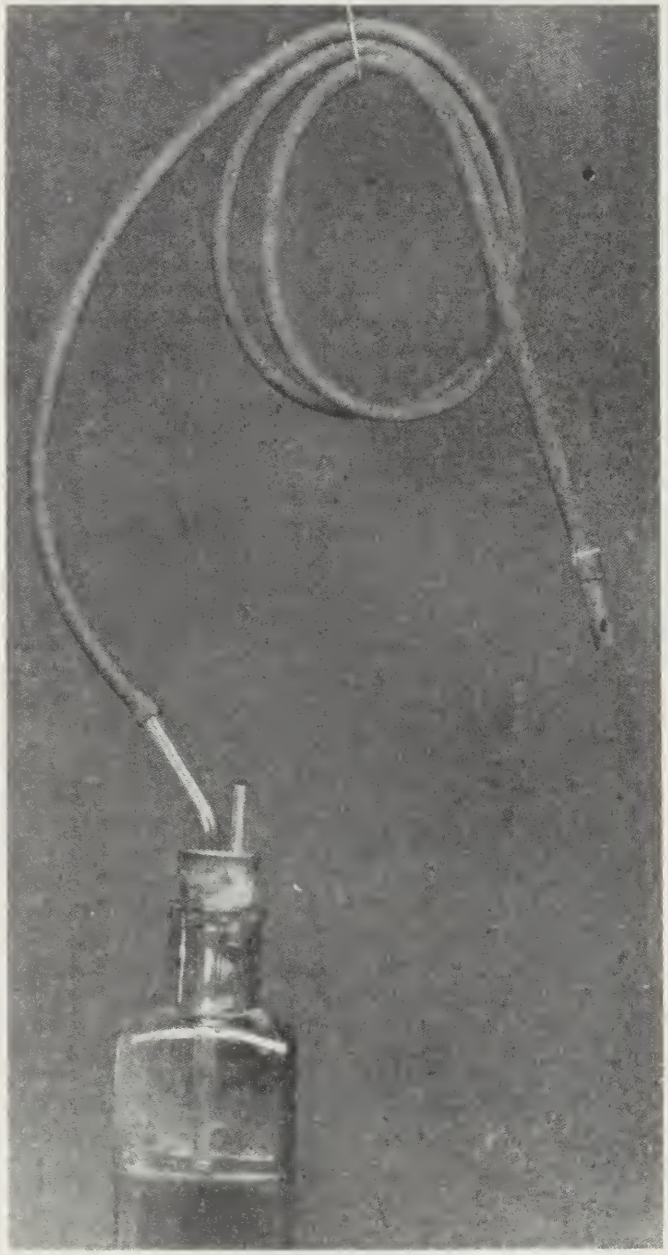


**Figure 5.** Kenyon's drainage for empyema. Originally used for empyema, but used by Kenyon to drain traumatic hemopneumothorax.


#### Acknowledgment

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## Physicians and AIDS: The Direction is Clear

*CARMINE M. VALENTE PhD and ALBERT M. ANTLITZ MD*

In his book *Rats, Lice and History*, Hans Zinsser wrote, "the tragedy of man is that he has developed an intelligence eager to uncover mysteries, but not strong enough to penetrate them." The tragedy of HIV infection and its related complications present one of the unsolved mysteries of medicine.

The effects of this infection cannot be measured in mortalities alone. The Surgeon General has stated that "AIDS has brought fear to the hearts of most Americans—fear of disease and fear of the unknown." The fear is further heightened because sexual activity is a key element in the spread of AIDS. The Surgeon General went on to report that "some Americans have difficulties with the subjects of sex, sexual practices, and alternate life-styles." For some, there still exists a punishment-for-sin mentality: the notion that disease is visited upon certain individuals or communities because of their behaviors. These fear and punishment phenomena have been factors contributing to the difficulties in curtailing the spread of this infection.

With AIDS, there is yet no cure and no vaccine to prevent this disease. Thus expectations must focus on preventive approaches. Even when a cure for AIDS is discovered prevention will remain a high priority.

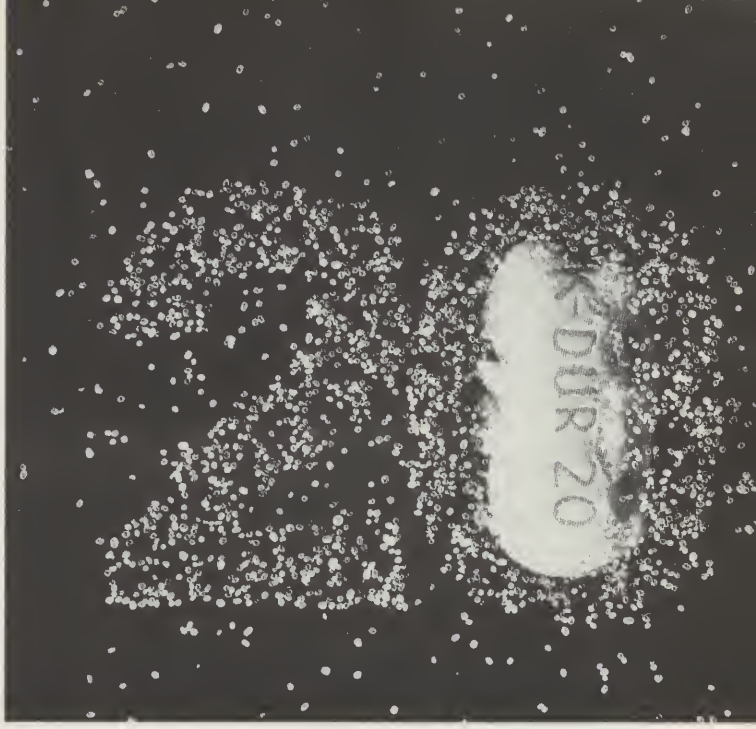
Examining efforts aimed at modifying life-styles to prevent disease, we find the results have been disappointing. In a September 1987 survey of Americans by the National Center for Health Statistics, *AIDS Knowledge and Attitudes*, most reported obtaining their AIDS information from television. The majority also reported they would look to their physician if they wanted more specific information about AIDS. For physicians to have an impact on the spread of AIDS they will need substantial education and preparation in:

- sexual and drug-use history taking
- effective counseling and communication strategies
- behavior-modification techniques
- appropriate referral procedures
- treatment protocols

Even with our limited knowledge about AIDS, we can control its spread. Restricting sexual activity to a monogamous relationship with a person who does not have the AIDS virus and using condoms properly have been shown to be effective ways to avoid infection. Refraining from drug use or (among drug users) using clean needles, are also effective ways of avoiding infection.

In writing about influenza, infantile paralysis, and encephalitis, Zinsser remarked "even in cases where no

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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

**CONTRAINDICATIONS:** Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

**WARNINGS: Hyperkalemia**—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

**Interaction with Potassium Sparing Diuretics**—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

**Gastrointestinal Lesions**—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

**Metabolic Acidosis**—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

**PRECAUTIONS:** The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

**Laboratory Tests:** Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

**Drug Interactions:** Potassium-sparing diuretics; see **WARNINGS.**

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Long-term carcinogenicity studies in animals have not been performed.

**Pregnancy Category C:** Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

**Nursing Mothers:** The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS:** One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

**OVERDOSAGE:** The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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# Discipline Commission Action

**In the Matter of**
**Leroy J. Amar MD**
**Before the**
**Commission on Medical Discipline**

## Interim Consent Order

Certain information having come to the attention of the Commission on Medical Discipline (the "Commission") concerning the practice of medicine by Leroy J. Amar MD (the "Respondent"), the Commission issued a charge letter dated August 6, 1987 alleging that Respondent had violated the following portions of §14-504 of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland (the "Act"):

> (22) Is disciplined by a licensing or disciplinary authority or convicted or disciplined by a court of any state or country for an act that would be grounds for disciplinary action under this section;

Notice of the charges was provided in the letter dated August 6, 1987 that was sent to the Respondent by certified mail, return receipt requested. A prehearing conference was scheduled and held on October 1, 1987.

Following discussions during the prehearing conference, Respondent agreed to enter into an Interim Consent Order. This Order will be effective until such time as further Findings of Fact, Conclusions of Law, and an Order are issued by the Commission.

## Findings of Fact

Based on the information known and available to it the Commission has reason to believe that:

1. At all times relevant to this matter Respondent was and is a physician licensed to practice medicine in the State of Maryland;

2. Respondent's medical practice came to the attention of the Commission of Medical Discipline because of the revocation of his certificate to practice medicine in the State of California by the Division of Medical Quality, Board of Medical Quality Assurance, Department of Consumer Affairs, State of California, effective February 2, 1979. The Decision and Order issued by the State of California were based on Respondent's gross negligence, incompetence, and gross incompetence in the practice of medicine, specifically in his performance as a cosmetic surgeon. Additionally, Respondent was found guilty of aiding and abetting an unlicensed individual in the practice of medicine and of using a fictitious name at times when he did not hold a permit for such use that had been issued by the Division of Licensing.

3. By Decision and Order dated August 14, 1987, The Division of Medical Quality, Board of Medical Quality Assurance, Department of Consumer Affairs, reinstated Respondent's physician's and surgeon's certificate on a probationary basis and placed Respondent on probation to the Board of Medical Quality Assurance for a period of ten (10) years subject to terms and conditions contained in the Order.

4. Respondent is currently practicing medicine in the State of Maryland only at the following locations:
   a. Eastside Clinic, 1235 E. Monument Street;
   b. Westside Clinic, 2414 Reisterstown Road;
   c. Gwynn Oak Clinic, 4714 Liberty Heights Avenue;
   d. Village Medical Center, 4200 Edmondson Avenue;

5. In his current practice at the above-listed locations, Respondent employs licensed or registered health care practitioners including: physicians, registered physical therapists, licensed assistant physical therapists, and physicians' assistants. Respondent has provided the Commission with a list of the names, license or registration numbers, and practice locations for each of the persons he employs;

6. Respondent's current practice does not include cosmetic surgery.

## Conclusion of Law

Based on the foregoing facts, the Commission finds:

1. That the public health, safety, and welfare do not imperatively require emergency action in this case and that, as a licensed physician, Respondent is entitled to continue in the unrestricted practice of medicine until such time as the Commission issues Findings of Fact, Conclusions of Law, and an Order which impinge upon that right.

## Order

It is this 1st day of December 1987 by the Commission on Medical Discipline:

ORDERED that Respondent may continue the practice of medicine in the State of Maryland until such time as the Commission issues further Findings of Fact, Conclusions of Law, and an Order pursuant to the charge letter of August 6, 1987.

ORDERED that in the interim between the date of this ORDER until such time as the Commission issues further Findings of Fact, Conclusions of Law, and an Order pursuant to the charge letter of August 6, 1987, based upon Respondent's voluntary consent, Respondent's practice shall be subject to the following terms and conditions:

1. Respondent shall not practice surgery;

2. Respondent shall practice at the following locations: Eastside Clinic, 1235 E. Monument Street; Westside Clinic, 2414 Reisterstown Road; Gwynn Oak Clinic, 4717 Liberty Heights Avenue; and Village Medical Center, 4200 Edmondson Avenue;

3. Respondent shall notify the Commission in writing of any additional locations for his practice as a physician prior to beginning practice at a location other than the four locations listed in this Order;

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*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*

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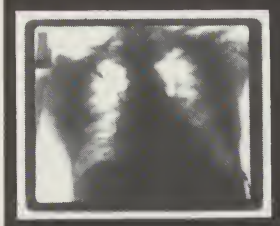
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4. Respondent shall continue to notify the Commission in writing of the names, educational background, license or registration numbers, and practice locations for each licensed medical practitioner he supervises at any and all of Respondent's practice locations. Respondent shall update the list at any time before personnel changes are made;

5. Respondent shall cooperate fully with the expedited peer review that has been requested from the Maryland Academy of Family Practice;

6. Respondent shall practice in accordance with the Act and regulations.

***ROSE MARY HATEM BONSACK*** **MD, Executive Secretary**
**Commission on Medical Discipline**

**Consent**

I, Leroy J. Amar, by affixing my signature hereto, acknowledge that;

1. I am represented by George L. Russell, Jr., Esquire and I have had the opportunity to consult with counsel before signing this document.

2. I am aware that without my consent, my license and my right to practice medicine in this State cannot be limited except pursuant to the provisions of §10-405 of the Administrative Procedure Act, State Government Article, Annotated Code of Maryland;

3. I am aware that a formal evidentiary hearing before the Commission may be scheduled;

By this Consent, I hereby consent and submit to the foregoing Order and its conditions which I understand will be effective until such time as the Commission issues further Findings of Fact, Conclusions of Law, and an Order. I do not admit to the truth of the charges, but I acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, and to call witnesses on my own behalf and to all other substantive and procedural protections provided by law. I also recognize that, with regard to this Order, I am waiving my rights to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I waive all such rights and acknowledge that by my failure to abide by the conditions set forth in this Order until such time as the Commission issues further Findings of Fact, Conclusions of Law, and an Order, I may suffer formal disciplinary sanctions against my license to practice medicine in the State of Maryland.

***LEROY J. AMAR*** **MD**

• • •

**In the Matter of**
**Martin Feldman MD**
**Before the**
**Commission on Medical Discipline**

**Order for Emergency Suspension of Medical License**

Based on information received from the Peer Review Committee of the Medical and Chirurgical Faculty of the State of Maryland and the results of neuropsychological, psychological, and psychiatric examinations regarding the practice, mental and physical status of Martin Feldman MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

## Findings of Fact

Based on the information known and available to it the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine in Maryland.

2. By letter dated August 6, 1984, the Commission was notified of the denial of reappointment of Respondent by the Department of Medicine, North Charles General Hospital, thus terminating his privileges, effective immediately. The reason for denial resulted from ongoing peer review of Repondent's practice of medicine and documented incidents of inappropriate behavior that the Board of Trustees at North Charles General Hospital felt constituted grounds for denial under Section 14-504 (4) of the Maryland Medical Practice Act, "Is professionally, physically or mentally incompetent."

3. On October 22, 1984, the Commission requested that the Baltimore County Medical Association, Inc., (the "Association") investigate Respondent's medical practice.

4. In September of 1985, the Baltimore County Peer Review Committee of the Association forwarded its completed review of Respondent's practice along with the recommendation that Respondent "be considered for practice rehabilitation and program at the University of Maryland."

5. On October 10, 1985, the Commission referred Respondent Edward J. Kowalewski MD, Professor and Chairman of the Department of Family Medicine, University of Maryland Hospital, for an evaluation of Respondent's ability to practice medicine.

6. By letter dated November 18, 1985, Dr Kowalewski expressed concern regarding Respondent's emotional stability and recommended that Respondent be given a psychiatric evaluation with special emphasis on projection testing.

7. On December 2, 1985, the Commission requested that Jonas R. Rappeport MD perform a complete psychiatric examination on Respondent and forward a full report of the results of his findings to the Commission.

8. On January 13, 1986, the Commission received a


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## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

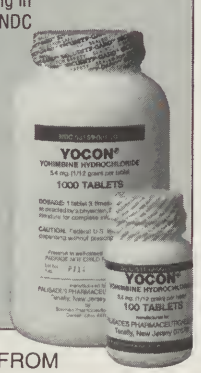
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

**References:**

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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psychiatric evaluation of Respondent from Jonas R. Rappeport MD. In his evaluation, Dr. Rappeport noted a lack of evidence of any major psychosis, found a few areas "troublesome" and stated his belief "that we may be dealing with a person who is starting to show some deterioration in his intellectual abilities." Dr. Rappeport recommended further psychological testing for clarification.

9. By letter dated April 28, 1986, the Peer Review Committee of the Medical and Chirurgical Faculty, ("Med-Chi Peer Review") received a complaint from a physician regarding Respondent's medical practice. In his complaint, the physician alleged that three patients he had seen in consultation who had been under the primary care of Respondent had been inappropriately treated by Respondent with potentially toxic drugs, Gold, and D-Penicillamine and also noted repeated prescriptions of narcotic analgesics.

10. On August 19, 1986 the Commission voted to request further psychological testing for Respondent.

11. On October 21, 1986 the Commission received an evaluation of Respondent from James E. Olsson PhD, clinical psychologist. In his evaluation, Dr. Olsson reported that Respondent was functioning in the average range of intelligence, that Respondent's decrement in functioning may have been due to organic factors and recommended neuropsychologic testing for further assessment. Dr. Olsson also opined that Respondent's ability to function adequately as a physician may be affected by certain of Respondent's intellectual deficiencies and personality attributes as further described in Dr. Olsson's report.

12. By letter dated December 5, 1986 the Commission requested that Denis Madden PhD perform a neuropsychological evaluation of the cognitive knowledge of Respondent.

13. On February 24, 1987, the Commission received a neuropsychological evaluation from Denis J. Madden PhD, the results of which strongly suggest moderate to severe impairment of adaptive abilities dependent upon organic brain functioning.

14. On April 27, 1987 the Commission received a summary and report prepared by Dr. Rappeport after review of his earlier report, the psychological testing report of James E. Olsson PhD, and neuropsychological testing report of Denis J. Madden PhD. Dr. Rappeport opined that it was not possible for a physician who displayed the findings of his clinical examination upon Respondent as well as the results of the psychological tests as reported by Drs. Olsson and Madden to practice in a satisfactory fashion, that Respondent does not have the intellectual capacity, as evidenced by the examinations, to deal with any complex medical situations, to learn new medical material, or to function in any stressful situation. Further, Dr. Rappeport expressed serious concerns about Respondent's ability to practice medicine without endangering the public.

15. In May 1987 the Commission requested that Med-Chi Peer Review provide an up-to-date evaluation of

Respondent's practice.

16. On August 23, 1987 the Commission received a complaint from one of Respondent's patients alleging unprofessional conduct by Respondent.

17. In December of 1987, the Commission received a report of Respondent's practice from Med-Chi Peer Review. The Med-Chi Peer Review Committee found Respondent incapable of competently practicing medicine based upon review of the results of the neuropsychological, psychological, and psychiatric testing along with the findings from a site visit to Respondent's office.

18. To practice medicine competently and safely, one must be able to understand complex situations, logically analyze and reason, have a good memory, be able to concentrate and maintain attention, adapt to novel types of situations, and be flexible in thinking.

19. Respondent is presently actively engaged in the practice of medicine.

20. The inability to understand complex situations, logically analyze and reason, have a good memory, be able to concentrate, maintain attention, adapt to novel types of situations, and be flexible in thinking when one is practicing medicine poses an imminent and grave danger to the public health, welfare, and safety of the citizens of Maryland.

21. Based upon the above Findings of Fact, the Commission has reason to believe that Respondent is professionally, mentally, and physically incompetent §§14-504(4), of the Act, and could, after notice and an opportunity for a hearing, be reprimanded, placed on probation, or have his medical license suspended or revoked as more fully set forth in the charge letter.

22. Based on the foregoing findings the Commission has reason to believe that Respondent is professionally, physically, or mentally incompetent.

**Conclusion of Law**

Based on the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b), Annotated Code of Maryland.

**Order**

It is this 22nd day of December 1987 by the Commission on Medical Discipline

ORDERED that pursuant to the authority vested in the Commission by State Law Article, §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver or have delivered to the Commission's Executive Director: (1) his original license from the Board of Medical Examiners (License Number D-1083); (2) his renewal card for his license to practice medicine from the Board of Medical Examiners; (3) his federal controlled dangerous substance registration certificate; (4) his Maryland State Division of Drug Control, controlled dangerous substances registration; and (5) any prescription pads on which are enprinted his name or registration number; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the Respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**


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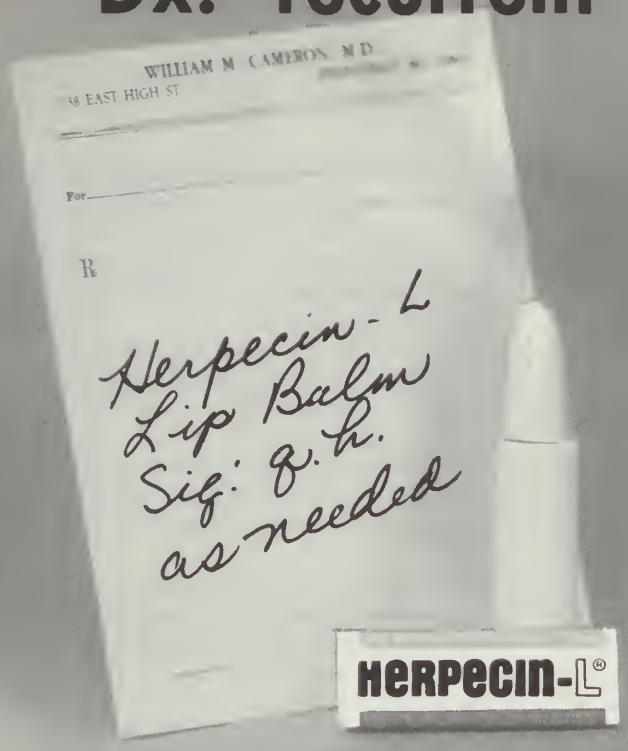


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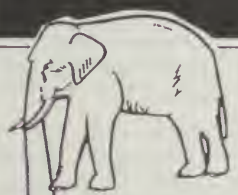
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**May 2–4 NIH Consensus Development Conference: Cochlear Implants,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda, Info: Conference Registrar, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-MEET between 8:30 a. m. and 5 p.m.).

**May 4–6 1988 Region II & III High Blood Pressure Control Conference,** Omni Hotel in Richmond, VA. Info: P. Ciavarella or J. Richardson, conference co-chairpersons, Virginia Dept. of Health 804-786-4065.

**May 6 Psychiatric Outcomes of Neurodevelopmental Disabilities,** Psychiatric Institute of Washington Gymnasium, 4460 MacArthur Blvd NW, Washington, DC 20007, Noon-1:15 p.m. Registration required (but no fee) for program/lunch; 1 Cat I credit for physicians; 1 Cat A credit for psychologists. Info: M. Burge (202-828-1888).

**May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session,** Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

**June 27–29 NIH Consensus Development Conference: Perioperative Red Cell Transfusion,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-469-MEET).

**Shady Grove Adventist Hospital,** 9901 Medical Center Drive, Rockville, MD 20850. Grand Rounds:

**April 28 Modern Chiropractic Therapy**
**May 5 Hyperbaric Medicine: 1988**
**May 19 Back Pain; Neck Pain**

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### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–1988. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**May 9–10 Continuing Problems in Critical Care,** Sheraton Inner Harbor Hotel. Fee: physicians $225, nurses and therapists $125. Info: P. Macedonia 301-955-6095.

**May 21 Orthopedics for the Pediatrician.** Fee: $45; 4.5 AMA Cat I credits. Info: F. Boling 301-955-2959.

**Jun 1–18 First Summer Institute in Environmental Studies,** sponsored by The Johns Hopkins School of Hygiene and Public Health, Department of Environmental Sciences. Info: Dr. J. Corn 301-955-2609.

**Jun 2–3 Broyles Symposium: The Science and Surgery of Laryngeal Cancer.** Fee: $275; 13 AMA Cat I credits. Info: F. Boling 301-955-6085.

**Jun 6–8 Toxicology Update '88: Current Concepts in Reproductive Toxicology.** Fee: $450. Info: Dr. J. Corn 301-955-2609.

**Jun 9–10 Principles and Practices of Data Collection, Data Management, and Data Analysis for Clinical Trial,** Fee: $650; AMA Cat I credits. Info: F. Boling 301-955-2959.

**Jun 20–22 An Advanced Pediatric Life Support Course.** Fee: $415; 20 AMA Cat I credits, other appropriate credits pending. Info: P. Macedonia 301-955-6085.

**Jul 10–13 March of Dimes Clinical Genetics Conference: Heritable Disorders of Connective Tissue and Skeletal Dysplasias,** Baltimore, Convention Center. Fees: before June 1, $150; thereafter, $175. Student rates available. 21 AMA Cat I credits, 2.1 CEUs. Info: C. Kearney 301-955-3168.

**Reproductive Endocrinology Lecture Series 1988,** Thursdays through May 12, 3:30 to 4:30 p.m., Jones Conference Rm. Houck Bld, Rm 246, 600 N. Wolfe St, Baltimore, MD 21205. Free to members of the medical profession; 1 AMA Cat I credit per hour. Info: F. Boling 301-955-6085.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/11/88–12/5/88. Info: Celia Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer 5/9–13, 8/8–12, 11/14–18. Fee $460. 40 AMA Cat I credits.

**Advanced Practicum in Ultrasound** 12/5–9. Fee: $460; 40 AMA Cat I credits.

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icine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**May 16–18 Second International Conference on the Ilizarov Techniques,** Sheraton Premiere, Tysons Corner, VA. Fee $575; 15 AMA Cat I credits.

**Jun 16–17 Seventh Annual OB/GYN Symposium,** Annapolis Hilton Hotel, Annapolis. Fee: $125; AMA Cat I credits and ACOG cognates available.

**Jun 19–24 Fourteenth Annual Family Medicine Review Course,** Sheraton Fontainebleau Inn & Spa, Ocean City. Fee: $395 (daily rates available); 20+ AMA Cat I credits. AAFP credits available.

**Visiting Professor Program** Director of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. AMA Cat I credits available. Direct all inquiries to CME (301-328-3956)

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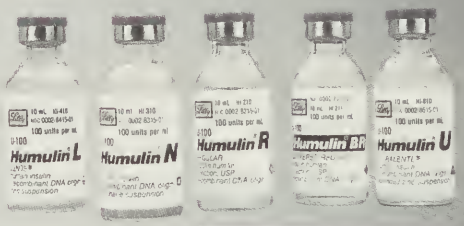
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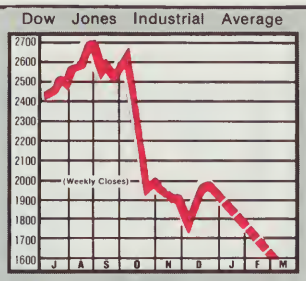
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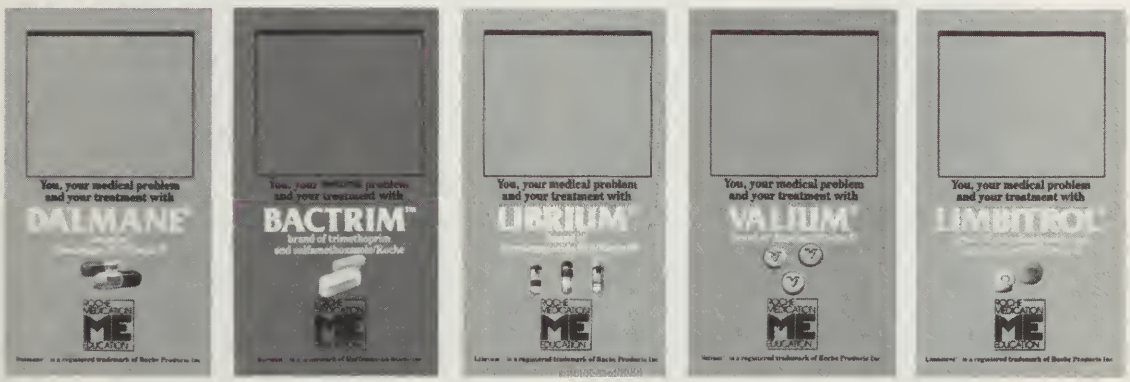
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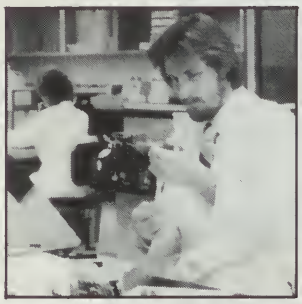
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For several years May has been proclaimed both the national and the Maryland High Blood Pressure Month. However, public and professional education efforts continue throughout the year.

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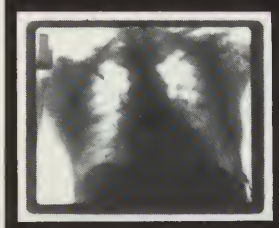

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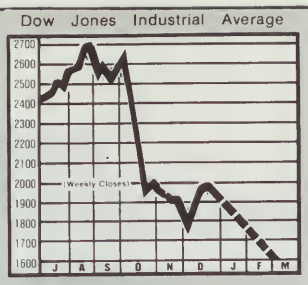
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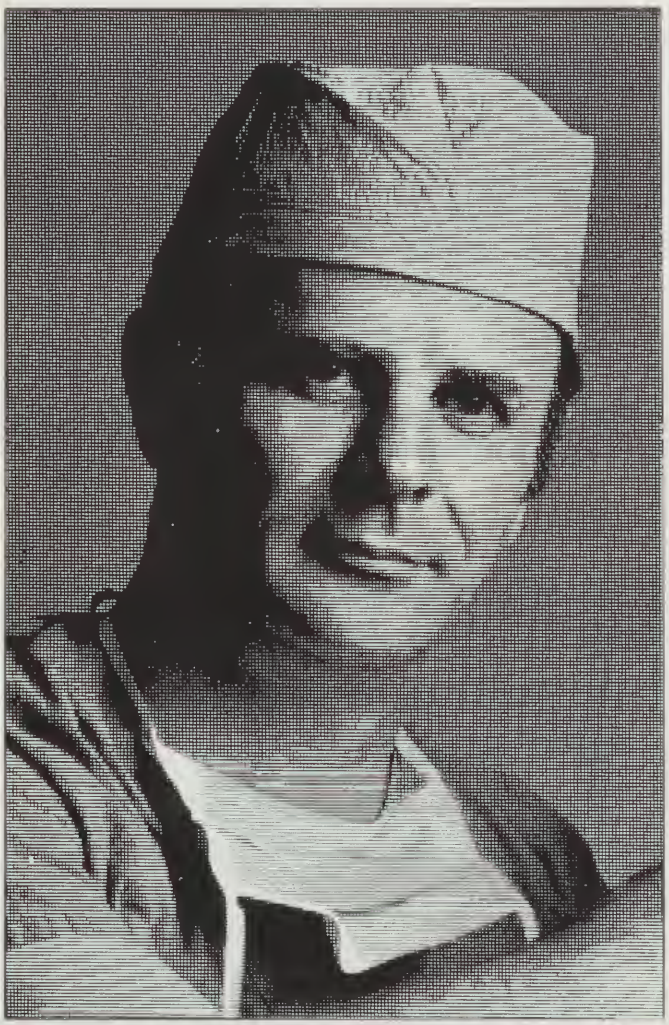


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MAY 1988

## LOOK OUT FOR VIBRIOS IN MARYLAND! A BRIEF REVIEW OF THE EPIDEMIOLOGY AND CLINICAL ASPECTS OF VIBRIO INFECTIONS

With summer approaching, clinicians and microbiologists in Maryland should be aware of the possibility of infections caused by vibrio species. These organisms are endemic to the Chesapeake as well as other coastal areas worldwide. While the infections are relatively rare, vibrio cases do occur in individuals permanently residing in Maryland and in persons returning to Maryland after overseas travel. Best known of the vibrio species is Vibrio cholerae 0 group 1, responsible for the disease cholera. The organism, which is distinguished microbiologically by its ability to agglutinate in V. cholerae 01 antiserum, may be endemic along the U.S. gulf coast. Only one U.S. acquired case has been reported in Maryland in this century; this 1984 case was linked to consumption of crab meat that had been harvested along the Texas coast. However, there are a number of other vibrios that are much more prevalent in Maryland. Included among these are Vibrio cholerae strains that do not agglutinate in the 01 antiserum (non-01 Vibrio cholerae). While non-01 Vibrio cholerae are usually associated with relatively mild disease, serious illness, including septicemia, has been reported.

Over the last several years, there has been a significant increase in the number of vibrio isolates received by the Maryland State Laboratory for identity confirmation. This may reflect either an increase in infections seen in the community or improved isolation and reporting. Currently, 11 vibrio species are considered pathogenic (or potentially pathogenic) of which 8 have been isolated in Maryland from a variety of clinical specimens.

Gastrointestinal illness is the most common clinical manifestation, most often due to Vibrio parahaemolyticus. The first United States outbreaks of illness from this organism were reported here in Maryland in 1971 and linked to improperly cooked or processed crab meat. Other species implicated in gastrointestinal illness include Vibrio

fluvialis, Vibrio mimicus, Vibrio hollisae, and non-01 Vibrio cholerae. The most important symptom is diarrhea which can sometimes be profuse and watery, indistinguishable from cholera. Other symptoms include abdominal cramps, nausea, vomiting, fever and chills. A dysentery-like syndrome with fecal leukocytes and bloody stools can occur. A case of terminal ileitis mimicking appendicitis has also been reported from Annapolis, Maryland associated with a mixed infection with Vibrio fluvialis and Vibrio mimicus.

Other infections caused by vibrios include wound infections (occurring generally from cutaneous injuries contaminated by sea water), otitis, and septicemia. Species most often associated with infections at these sites are Vibrio vulnificus, Vibrio alginolyticus, Vibrio damsela, and non-01 Vibrio cholera.

Vibrio vulnificus deserves special comment. It is responsible for a syndrome of primary septicemia seen in patients with chronic underlying diseases, especially those with liver disease. Infection is acquired via the gastrointestinal tract following consumption of seafood, particularly raw oysters. Patients often present in shock; 70% have characteristic bullous skin lesions. Mortality exceeds 50% despite appropriate antibiotic therapy (such as tetracycline). Vibrio vulnificus also causes wound infections ranging from mild cellulitis to rapidly progressive myositis with bacteremia.

The epidemiology of the various vibrio species is similar. The organisms are free living in marine or brackish water. Most cases cluster around coastal areas when the water is warmer (summer and fall). Cases are associated with either direct water contact or consumption of seafood, especially raw shellfish. Diagnosis can be difficult. While blood culture systems can grow vibrios easily, most laboratories do not routinely use vibrio selective media for isolation from other sources. If a vibrio infection is suspected, the microbiology laboratory should be notified so specimens can be plated onto selective media, such as TCBS agar (thiosulfate citrate bile salts sucrose agar).

The Maryland Department of Health and Mental Hygiene, in collaboration with the University of Maryland, is currently studying clinical and epidemiologic features of vibrio infections in Maryland and asks that any vibrio isolate be referred to the state laboratory for confirmation. Questions regarding vibrio infections are welcome. Contact Charles W. Hoge, M.D. or J. Glenn Morris, M.D., M.P.H., at University of Maryland School of Medicine, Division of Geographic Medicine, phone 301-328-5328.

**Submitted by:** Charles W. Hoge, M.D. and J. Glenn Morris, M.D., M.P.H., Division of Geographic Medicine and Infectious Diseases, Department of Medicine, University of Maryland School of Medicine--**REFERENCES AVAILABLE UPON REQUEST.**

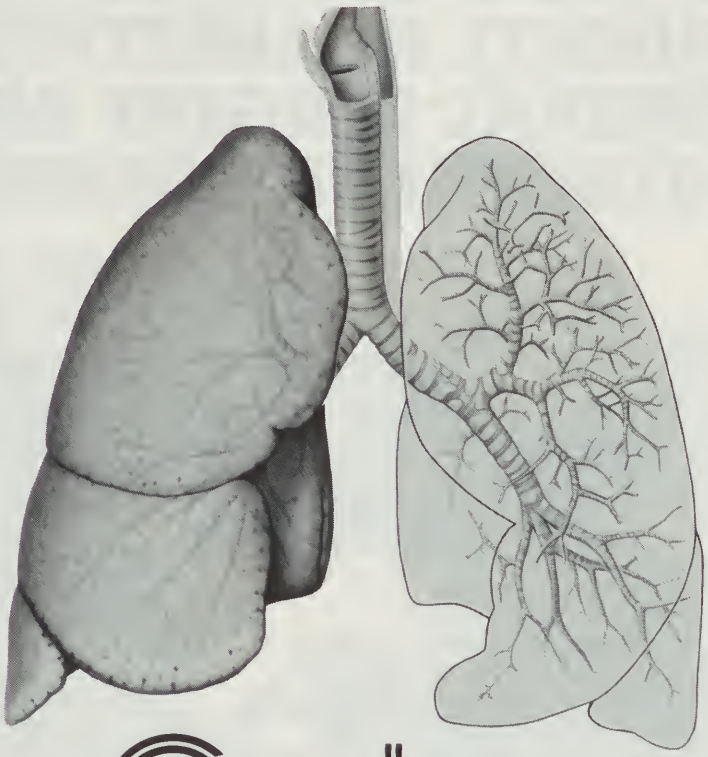
# MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE
# REPORTED CASES OF NOTIFIABLE DISEASES IN MARYLAND IN 1987 BY ONSET DATE

| | | RUBEOLA (MEASLES) | RUBELLA (GERMAN MEASLES) | INF. PAROTITIS (MUMPS) | PERTUSSIS | VIRAL HEPATITIS | | | | MENINGOCOCCAL INFECTIONS | MENINGITIS, H. INFLUENZAE | MENINGITIS, VIRAL | ENCEPHALITIS, VIRAL | ROCKY MOUNTAIN SPOTTED FEVER | TUBERCULOSIS | SALMONELLOSIS | TYPHOID FEVER | SHIGELLOSIS | SYPHILIS, PRIMARY AND SECONDARY | SYPHILIS OTHER | GONORRHEA | ANIMAL BITES | RABIES, ANIMAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | NA/NB | UNSP. | | | | | | | | | | | | | | |
| STATE TOTALS | 1987 | 10 | 4 | 47 | 27 | 253 | 849 | 58 | 39 | 55 | 124 | 389 | 32 | 43 | 429 | 1810 | 11 | 632 | 597 | 621 | 24132 | 10524 | 450 |
| | 1986 | 35 | 1 | 34 | 166 | 198 | 840 | 84 | 29 | 52 | 109 | 275 | 34 | 29 | 362 | 1642 | 16 | 233 | 448 | 574 | 28287 | 10451 | 683 |
| | 1985 | 115 | 6 | 38 | 312 | 89 | 709 | 120 | 52 | 61 | 100 | 281 | 32 | 27 | 434 | 1504 | 12 | 190 | 500 | 663 | 31270 | 11065 | 760 |
| | 1984 | 22 | 1 | 46 | 59 | 60 | 694 | 109 | 85 | 46 | 118 | 215 | 37 | 26 | 427 | 1346 | 3 | 242 | 451 | 704 | 28480 | 11484 | 1100 |
| | 1983 | 11 | 3 | 45 | 39 | 120 | 827 | 98 | 95 | 53 | 93 | 273 | 24 | 34 | 409 | 1407 | 6 | 462 | 517 | 799 | 30368 | 12071 | 838 |
| | Population Maryland State 4,499,000 | | | | | | | | | | | | | | | | | | | | | | |
| | Baltimore City 753,300 | 2 | – | 5 | 5 | 19 | 324 | 5 | 18 | 16 | 34 | 110 | 3 | 1 | 147 | 510 | 3 | 296 | 363 | – | 13008 | 1877 | 8 |
| | Counties, total 3,745,700 | 8 | 4 | 42 | 22 | 234 | 525 | 53 | 21 | 39 | 90 | 279 | 29 | 42 | 282 | 1300 | 8 | 336 | 234 | 256 | 11124 | 8647 | 442 |
| POLITICAL SUBDIVISION | Allegany 73,700 | – | – | – | – | 2 | 4 | 1 | 1 | 1 | 1 | 13 | – | 2 | 2 | 19 | – | 1 | – | – | 41 | 262 | 9 |
| | Anne Arundel 411,100 | 2 | – | 13 | 1 | 23 | 51 | 7 | 2 | 7 | 10 | 17 | 2 | 6 | 16 | 120 | – | 27 | 14 | 15 | 742 | 1315 | 34 |
| | Baltimore Co. 672,900 | – | – | 3 | – | 13 | 60 | 7 | 1 | 9 | 3 | 60 | 9 | 1 | 50 | 225 | 1 | 87 | 13 | 32 | 928 | 876 | 26 |
| | Calvert 44,500 | – | – | – | – | 1 | 3 | – | – | 1 | 2 | – | – | 1 | 2 | 24 | – | – | – | 1 | 108 | 90 | 28 |
| | Caroline 24,400 | – | – | – | – | 5 | 4 | 1 | – | – | 1 | 5 | – | 1 | 1 | 13 | – | – | 2 | – | 161 | 57 | – |
| | Carroll 113,400 | – | – | – | 1 | 8 | 16 | – | – | – | 2 | 10 | 1 | 1 | 1 | 30 | – | 3 | – | – | 72 | 328 | 21 |
| | Cecil 68,100 | – | – | 4 | 4 | 35 | 14 | 4 | 6 | 1 | 2 | 12 | – | 2 | 2 | 28 | – | – | 2 | 2 | 171 | 499 | 95 |
| | Charles 91,200 | – | – | – | – | 8 | 12 | 1 | – | – | 3 | 11 | – | 2 | 4 | 37 | – | 14 | 2 | 2 | 236 | 267 | 3 |
| | Dorchester 29,800 | – | – | – | 1 | 1 | 12 | – | – | – | 3 | 4 | 1 | 3 | 3 | 15 | – | – | 7 | 1 | 420 | 78 | – |
| | Frederick 134,200 | – | – | – | 8 | 2 | 48 | 5 | 1 | 3 | 4 | 1 | – | 3 | 7 | 45 | – | 8 | 3 | 7 | 278 | 355 | 43 |
| | Garrett 26,500 | – | – | – | – | 1 | – | – | – | – | – | 1 | 1 | – | 1 | 3 | – | – | – | – | 13 | 105 | 6 |
| | Harford 157,200 | – | – | – | 2 | 2 | 17 | 2 | 2 | 2 | 3 | 28 | 3 | 4 | 3 | 48 | – | 16 | – | 2 | 255 | 487 | 27 |
| | Howard 154,000 | – | 1 | 3 | – | 3 | 35 | 2 | – | – | 5 | 9 | 1 | – | 11 | 56 | – | 31 | 6 | 2 | 135 | 279 | 34 |
| | Kent 17,000 | – | – | – | – | 11 | 2 | 1 | – | – | – | 1 | – | – | 2 | 5 | – | – | – | – | 14 | 45 | 1 |
| | Montgomery 675,000 | 3 | 2 | 8 | 3 | 42 | 63 | 6 | 2 | 8 | 22 | 43 | 1 | 3 | 57 | 167 | 1 | 65 | 7 | 26 | 914 | 1189 | 70 |
| | Prince George's 685,100 | 3 | 1 | 6 | 1 | 70 | 129 | 7 | 4 | 4 | 17 | 27 | 3 | 2 | 73 | 304 | 6 | 63 | 122 | 127 | 5111 | 1365 | 16 |
| | Queen Anne's 30,100 | – | – | – | – | 1 | 1 | 1 | 1 | 1 | 1 | 4 | – | 2 | 3 | 7 | – | – | 1 | 1 | 63 | 117 | – |
| | Saint Mary's 68,400 | – | – | – | – | 2 | 9 | – | – | – | 1 | 2 | 1 | 1 | 4 | 33 | – | – | 3 | 3 | 196 | 137 | 14 |
| | Somerset 19,200 | – | – | – | – | – | 4 | – | – | – | 2 | 1 | – | – | 6 | 6 | – | – | 12 | 3 | 83 | 67 | – |
| | Talbot 27,700 | – | – | 1 | 1 | 2 | 3 | – | 1 | – | – | 1 | 2 | 6 | 2 | 12 | – | – | 2 | 1 | 118 | 91 | – |
| | Washington 114,700 | – | – | 1 | – | – | 16 | 1 | – | 1 | 4 | 19 | 1 | 1 | 4 | 25 | – | 5 | 23 | 16 | 293 | 350 | 14 |
| | Wicomico 70,300 | – | – | 2 | – | 2 | 10 | 5 | – | – | 3 | 8 | 3 | – | 26 | 52 | – | 13 | 14 | 14 | 614 | 217 | 1 |
| | Worcester 37,200 | – | – | 1 | – | – | 12 | 2 | – | 1 | 1 | 2 | – | 1 | 2 | 26 | – | 3 | 1 | 1 | 158 | 71 | – |

| OTHER DISEASES | STATE | BALTIMORE CITY | COUNTIES |
|---|---|---|---|
| AIDS | 421 | 169 | Al–4, AA–12, Balt–22, Cal–3, Carol–2, Carr–1, Ce–2, Ch–2, Dor–4, Fr–4, Har–7, How–10, Kent–1, Mont–73, PG–91, Som–1, Tal–1, Wash–7, Wic–4, Wor–1 |
| Amebiasis | 2 | – | AA–1, Mont–1 |
| Chickenpox | 2042 | 666 | Al–5, AA–167, Balt–70, Cal–1, Carr–122, Ce–57, Ch–7, Fr–7, Har–41, How–243, Mont–246, PG–370, QA–24, Som–5, Wic–9 Wor–2 |
| Guillain–Barre' syndrome | 21 | 1 | Al–2, AA–3, Balt–2, Cal–1, Ch–2, Dor–1, Har–1, Mont–4, PG–3, Wash–1 |
| Influenza–like Illness | 561 | 62 | Al–1, AA–186, Cal–38, Ch–1, Har–214, How–24, Mont–14, PG–14, Wic–7 |
| Kawasaki syndrome | 14 | 2 | AA–3, Cal–1, Fr–2, Gar–1, Mont–2, PG–2, Wic–1 |
| Legionellosis | 29 | 12 | AA–2, Balt–1, Carr–1, Ce–1, Ch–1, Kent–1, Mont–2, PG–4, QA–1, Wash–3 |
| Leprosy | 2 | – | Mont–1, PG–1 |
| Leptospirosis | 3 | 3 | – |
| Lyme's disease | 20 | 1 | AA–3, Balt–2, Ce–2, Dor–1, QA–6, Som–1, Tal–2, Wic–2 |
| Malaria | 43 | 5 | AA–1, Balt–2, Ch–1, How–2, Kent–1, Mont–20, PG–11 |
| Meningitis, bacterial, other* | 155 | 80 | Al–1, AA–11, Balt–16, Cal–1, Carol–1, Carr–3, Ce–2, Ch–1, Dor–2, Har–8, How–6, Mont–6, PG–7, Tal–2, Wash–6, Wor–2 |
| Mycobacteriosis, atypical | 131 | 33 | Al–1, AA–23, Balt–9, Cal–1, Ce–3, Dor–1, Fr–5, Har–5, How–3, Mont–9, PG–35, QA–2, Wash–1 |
| Non–staph.infections in newborn | 106 | 15 | Al–1, AA–7, Balt–50, Carr–1, Ce–2, Ch–1, Fr–1, Har–15, How–1, Mont–8, PG–1, Wash–1, Wor–2 |
| Psittacosis | 3 | 1 | AA–1, Balt–1 |
| Staph. infections in newborn | 42 | 5 | Al–1, AA–2, Balt–22, Har–2, How–3, Mont–3, PG–3, Wic–1 |
| Streptococcal infections | 10410 | 1514 | Al–1116, AA–886, Balt–601, Cal–35, Carol–5, Carr–72, Ce–3, Ch–872, Fr–54, Har–258, How–1612, Kent–25, Mont–280, PG–1495, QA–151, StM–6, Som–138, Tal–316, Wash–179, Wic–762, Wor–30 |
| Toxic shock syndrome | 4 | – | AA–1, Mont–3 |

* excluding N. meningitidis and H. influenzae meningitis.

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**Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

**Contraindication:**
Known allergy to cephalosporins.

**Warnings:**
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

**Precautions:**
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

**Adverse Reactions:** (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

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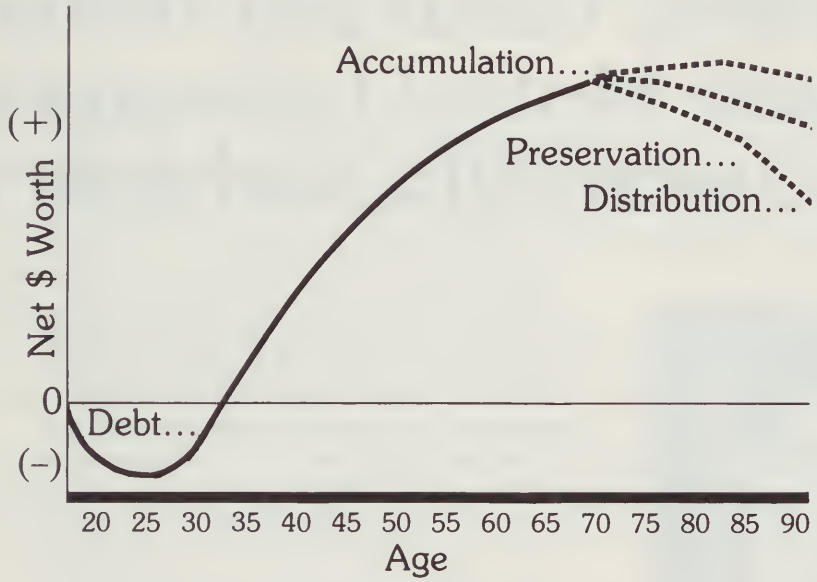
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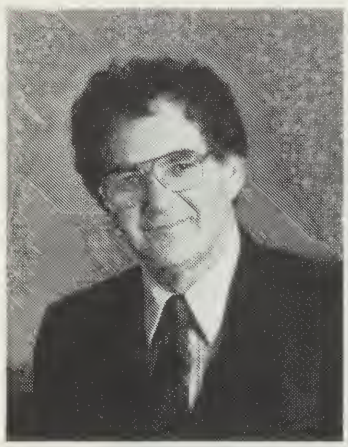
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# An open letter to the employees, clients and friends of Maryland Medical Laboratory, Inc. on our twelfth anniversary.



Selvin Passen, M.D.
President and Director of Laboratories

Almost twenty years ago, during the formative years of my professional career, I had a vision — to be the Director of a laboratory that would provide the medical community with the highest quality diagnostic laboratory services in the Baltimore-Washington region. I knew that this goal would not be easy to attain, but through hard work, quality services and — most important — dedicated personnel, it could be reached. It has been through the concerted efforts of our employees and their passion for quality, that we have become — in twelve short years — the fastest growing, quality oriented clinical laboratory in the country. I am proud of our employees and the high caliber of their professionalism. It is mainly through their efforts and devotions to the field of laboratory science that we have been able to achieve and maintain the quality associated with our name. Maryland Medical Laboratory, Inc. is accredited by the College of American Pathologists and the American Society of Cytology. We are one of only forty laboratories in the country to meet these rigorous requirements for pap smear testing.

On this, our 12th anniversary, I would like to take this opportunity to thank you, our clients and our patients. We deeply appreciate the faith and trust that Maryland Medical Laboratory, Inc. has earned from the medical community and we recognize your continued support. We also recognize our responsibility to you, the medical profession and our patients, to continually provide you with the best and most advanced technology that modern science has to offer. Not only must we keep pace with rapidly changing disciplines in laboratory medicine, but we must also pioneer new frontiers. This is our commitment to you for now and into the future. Thank you.

**MARYLAND MEDICAL LABORATORY, INC.**

1901 Sulphur Spring Road, Baltimore, Maryland 21227
(301) 247-9100

# Executive Director's Newsletter

May 1988

**MEDICARE**

Med-Chi is seeking information from member physicians who have been notified by a Medicare carrier that unsigned claims have been denied because of the carrier's perception that the medical care rendered was not medically necessary.

The notification of denial calls on the physician to refund the beneficiary for services that are not covered because they are not considered by the carrier to be "reasonable or necessary." Failure to refund may subject the physician to assessments of double the "relative charges," civil money penalties up to $2,000 and/or exclusion from the Medicare program for up to 5 years.

Information obtained thus far includes two instances where the Pennsylvania carrier requested a physician to make two refunds of fifteen cents each! The Med-Chi staff is vigorously pursuing this matter. Members are encouraged to report instances of Medicare denial to the Faculty.

**MALPRACTICE SURVEY RESULTS**

A total of 250 practicing obstetricians responded to Med-Chi's 1988 Malpractice Survey. Those 250 practicing obstetricians delivered 31,943 babies in 1987. If malpractice insurance premiums were to increase by 15%, 71 of those obstetricians would stop practicing obstetrics, take early retirement or move their practices to another state. An increase of 25% would cause 142 of the obstetricians to stop practicing in Maryland. A jump of 35% would leave only 69 obstetricians in practice in Maryland, with each physician averaging 470 deliveries each year.

Forty practicing neurosurgeons also responded to the Survey. A 15% increase would force 7 of them to close their Maryland practices. A jump in premium rates by 25% would cause 16 of them to quit, and a 35% increase would see the number of practicing neurosurgeons in the state cut in half.

Of 146 practicing orthopedic surgeons in Maryland, 3 would give up their practices in the face of a 15% increase. A 25% increase would lead 7 to quit. With a 35% jump in insurance premiums, 24 would stop practicing in Maryland.

**AMERICAN NURSES ASSOCIATION**

The American Nurses Association has indicated its intent to contact state medical associations to express its strenuous opposition to the AMA's new policy calling for the creation of a non-nurse bedside care giver - the registered care technologist (RCT) - as an innovative step to correct the growing shortage of bedside nurses and coordinate technician education. The AMA views the program for RCTs as noncompetitive with nursing and considers it a potential resource for recruitment into medicine as well as nursing.

A status report on the Registered Care Technologist Program will be forwarded to the AMA Board of Trustees early in May.

**ALCOHOLISM CALLED "WILLFUL MISCONDUCT"**

In response to the Supreme Court decision upholding the Veteran's Administration right to deny benefits to two recovered alcoholics on the ground that their conditions were caused by "willful misconduct," Kirk Johnson JD, General Counsel for the AMA, issued the following statement for the news media and the Federation:

"The American Medical Association is very disappointed in the Supreme Court's decision upholding the Veteran's Administration right to deny benefits to two veterans on the basis that their alcoholism was 'willful misconduct.' The Court said that the V. A. was within its rights to make such a determination because that appeared to be the congressional intent. The decision is very narrowly focused and should have no relevance in determining whether alcoholism should be regarded...as most of the medical community believes...as a disease.

The AMA has regarded alcoholism as a disease for over 30 years and will continue to do so. In its 'friend of the court' brief, the AMA did not suggest that blanket eligibility be made to all veterans with alcohol problems, but rather a case by case determination as to whether an individual's situation would permit a review."

**LEGISLATIVE DIRECTORY**

Med-Chi recently completed a Legislative Directory for 1988 that will include detailed definitions of all legislative proposals, as well as a legislative history of all bills opposed, favored, or monitored by the Faculty.

Any Med-Chi member interested in obtaining a copy of the Directory should contact Gerry Evans at 539-0872 in Baltimore, or toll-free in Maryland 1-800-492-1056.

Angelo J. Troisi, FACHE
Executive Director

# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policy statements are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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**PHYSICIAN DISPENSING:** The Faculty wishes to clarify that it does not endorse the wholesale dispensing of drugs by physicians to their patients. The Faculty fully supports the statement of the American Medical Association's Council on Judicial and Ethical Affairs. The AMA statement provided that:

> Although there are circumstances in which physicians may ethically engage in the dispensing of drugs, devices, or other products, physicians are urged to avoid regular dispensing and retail of drugs, devices or other products when the needs of patients can be met adequately by local ethical pharmacies or suppliers.

It is within this context that the Faculty developed its present statement on physician dispensing. "Physicians who dispense... should dispense as a convenience for the patient" is meant to help those patients living in rural areas and, therefore, may have to travel some distance to a local pharmacy to fill a prescription. The statement is also meant to help those patients who may require certain medical devices, and, therefore, may be fitted or provided with the devices without leaving the physician's office.

In Maryland, physicians have always had the right to personally prepare and dispense prescriptions under § 12-102(b) of the Health Occupations Article. Nevertheless, the Faculty is aware of the public's perception that there is an apparent conflict of interest when a physician sells the drug he prescribes.

Maryland legislation enacted in July 1986 (effective in January 1987) requires a physician to obtain the approval of the Board of Medical Examiners before dispensing prescriptions. There are exceptions to this requirement. The Federal Trade Commission, in a letter to the Board concerning its proposed regulations, suggested that the Board adopt regulations to encourage rather than restrict physician dispensing. These regulations have not yet been finalized by the Board.

Physicians are being solicited by drug repackaging companies, which often approach physicians with a message emphasizing the profits a physician can earn from selling such drug packages. To help physicians decide whether to dispense drugs and other medical devices, the following statement, published in the February 1988 issue of the Maryland Medical Journal, is again provided with an accompanying explanation:

## PHYSICIAN DISPENSING

Physician dispensing of drugs and other medical devices can be in the patient's best interest. Physicians who dispense should dispense only to their patients and should make the following disclosures:

1. That the item is dispensed as a convenience for the patient and that the patient is not obligated to purchase the item,
2. That the item may be purchased from a pharmacy or medical supply store of the patient's choosing, and,
3. The physician's charge for the item.

Physicians should include the following information on the label of each medication (excluding samples and starter doses) dispensed from their offices:

1. The name and address of the physician,
2. The date the medication is dispensed,
3. The month and year when the medication expires, if known,
4. Special handling instructions for proper storage,
5. The name and strength of the medication, and,
6. Instructions for proper administration of the medication and significant interactions with other drugs or substances relevant to that patient.

The physician should keep the manufacturer's lot number on record.

**Explanation:**

Med-Chi's Committee on Professional Ethics reviewed the Faculty's policy statement on physician dispensing in light of the state law, the proposed state regulations on physician dispensing, and recent legislative activity at the federal level.

The Committee concluded that while there is an inherent conflict, this practice, conducted properly, can provide a great benefit and convenience to the patient. Even so, since there is such great potential for abuse, physician dispensing should be open to close scrutiny.

The Committee believed that the following points should be included in a statement concerning physician dispensing:

1. Proper dispensing is in the patient's best interest and is something to be accepted;
2. A physician who dispenses must make appropriate disclosure to the patient of:
   a) His financial interest; and
   b) Alternative source of pharmaceutical services;
3. Physicians should dispense only to their patients; and
4. Standards should be set out for appropriate labeling requirements

**ABANDONMENT**

Ethical Opinion 108 provides that:

When a physician is away from his practice or otherwise unavailable, it is his responsibility to make suitable arrangements with another physician or group of physicians. This information must be readily available to his patients. Failure to make suitable arrangements could be construed as abandonment. For example, a recorded message on a physician's telephone simply advising his patients to go to the "nearest emergency room" is unsuitable and could be construed as abandonment. (PEC 11/15/84)

**ALTERNATIVE METHODS OF CANCER TREATMENT**

A. Duty of physician to educate patient - Before a physician treats any patient for any form of breast cancer, the physician shall educate the patient of alternative methods of treatment that may be medically practicable.

B. Duties of Department - The Department of Health and Mental Hygiene shall:

(1) Provide a standardized written summary in layman's language that:

(i) Lists all effective methods of treatment for breast cancer that may be medically practicable including surgical, radiological, chemotherapeutic, and all combinations of those treatments; and

(ii) Describes the advantages, disadvantages, risks, and procedures associated with each method of treatment listed;

(2) Update the standardized written summary annually;

(3) Distribute the standardized written summary to each hospital, clinic, and physicians office and other facility that performs treatments of breast cancer.

C. Satisfaction of requirements - A physicians satisfies the requirements of subsection A of this section if:

(1) The physician provides a breast cancer patient with the standardized written summary described in subsection B of this section in language that the patient understands;

(2) The patient receives the standardized summary within 5 days of the start of treatment for breast cancer, and;

(3) The patient signs a statement provided by the Department of Health and Mental Hygiene acknowledging the receipt of the standardized written summary.

D. Exceptions - This section does not apply if the attending physician certifies that:

(1) Treatment for breast cancer occurs within 5 days of the physician informing the patient of the diagnosis; and

(2) Treatment within this period of time was necessary to save the life of the patient.

E. Violations, penalties - A physician who violates any provision of subsection (a) of this section is subject to the provisions of 14-504 (27) of the Health Occupations Article. (1986, ch. 559).

# MR UPDATE

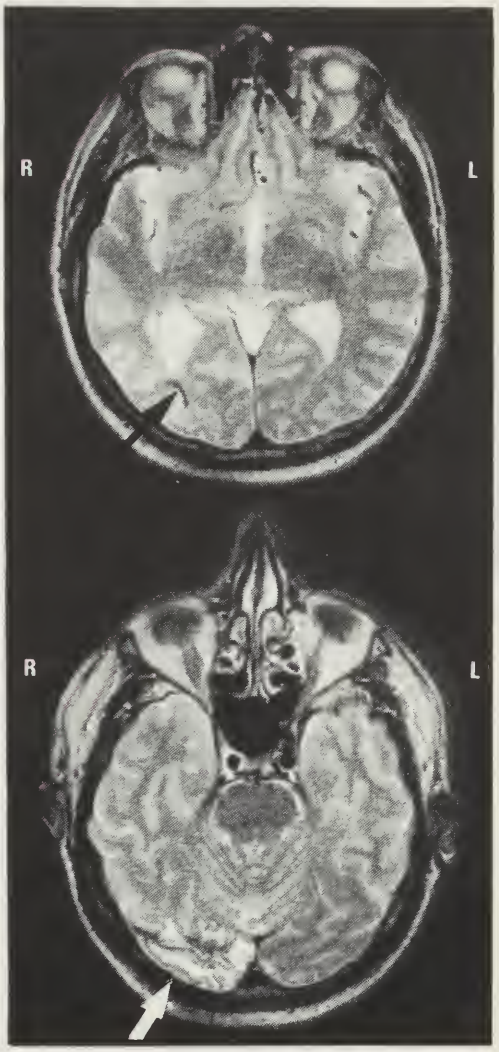
## MRI Advances the Detection of AVM's

### BRAIN EXAMINATION

**HISTORY:** A 52 year old man had two small right occipital hemorrhages, 18 months apart. After resolution, negative studies included two cerebral arteriograms and contrast CT scans.

**SCAN:** Several dark curvilinear structures, evidence of the flow void phenomenon, indicate abnormal vasculature in the right occipital lobe. Associated high signal intensity of adjacent white matter is compatible with edema, hemorrhage, or gliosis. Together these findings are consistent with occult arteriovenous malformation (AVM).

**MRI HIGHLIGHTS:** MRI is highly sensitive for AVM's which are otherwise occult by arteriography or CT scanning. These may be found in patients with spontaneous hemorrhage, seizure disorder, or other clinical presentations. In addition, the sensitivity of MRI for intracranial hemorrhage is being increased through the use of new partial flip imaging techniques. Refinements in signal processing, surface coils, and other techniques continue to expand the clinical indications of MRI. Because of its sensitivity, safety, and patient comfort, MRI is the screening technique of choice for most CNS abnormalities.




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# Hypertension and Related Cardiovascular Risk Factors

Cardiovascular diseases (CVD) remain the leading cause of death and a major source of disability and medical care costs in the United States and most Western countries. In 1985, 991,332 Americans died from CVD, 355,050 more than the total killed in World Wars I and II and the Korean and Vietnam conflicts. CVD killed almost as many Americans as did cancer, accidents, pneumonia, influenza, and all other diseases combined. Although impressive advances have been made in our understanding of these diseases and how they might be prevented, these preventive approaches have not been emphasized in medical education.

This issue of the *Maryland Medical Journal*, devoted to public health and clinical approaches to reducing the morbidity and premature mortality resulting from uncontrolled hypertension and related risk factors, is compiled by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors. The Commission, created as the Maryland High Blood Pressure Commission in 1976 by the Maryland Legislature, was charged with the responsibility of establishing guidelines and fostering educational programs about high blood pressure (HBP). On July 1, 1986, the Legislature increased the responsibilities of the Commission and changed its name to reflect its broader scope. The Commission has 16 members appointed by the Governor, 6 members representing the public, and 10 members representing various health organizations. One of its professional education activities is the regular *MMJ* department "HBP Commentary," which has presented articles on risk factors and has reported, periodically, on new national guidelines and recommendations related to CVD.

The eleven articles in this issue are organized under five topics:

- **Diabetes Mellitus, Hypertension, and Adherence:** public health and clinical perspectives on coexisting diabetes mellitus and hypertension, and practical advice for the physician to help to improve patients' adherence to treatment regimens
- **Renal Disease and Hypertension:** the role of hypertension in diabetic renal disease, and the prevention of end-stage disease by means of appropriate hypertensive therapy
- **Stroke:** risk factors for stroke, and an account of the Stroke Data Bank maintained at the University of Maryland
- **Alcohol and Hypertension:** accumulating evidence of an independent dose-response association between alcohol consumption and blood pressure
- **Lipids and Cardiovascular Disease:** the rationale for a public health approach to lowering blood cholesterol in the US population, a screening and intervention study based in a Baltimore school, and new nationally endorsed guidelines for treatment of hyperlipidemia with lipid lowering agents

The Commission is pleased to bring *MMJ* readers this issue, and we invite comment and inquiry.

**Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors**
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# Diabetes Mellitus and Hypertension: Public Health Perspective

*DAVID M. LEVINE MD*

**Diabetes mellitus and hypertension, each a major public health problem, are commonly associated diseases occurring in 2.5 million persons in the United States. Hypertension is twice as common among diabetic patients as among nondiabetics and is more frequent in blacks than whites. Treatment of persons with both diseases involves significant changes in their behaviors and necessitates the coordination of multiple resources. Community programs for high blood pressure and diabetes mellitus control may provide an efficient and effective approach.**

Both hypertension and diabetes mellitus are major public health problems in the United States, affecting approximately 60 million and 10 million individuals respectively.[1,2] Moreover, in more than 2.5 million individuals hypertension and diabetes are commonly associated diseases. Hypertension is approximately twice as common in persons with diabetes than those without diabetes. Both disorders are more frequent in the black population as compared to the white population, and the prevalence of the coexisting conditions is approximately twice as great as in the black population.

Hypertension contributes substantially to the morbidity and mortality from diabetes, particularly in blacks. Uncontrolled high blood pressure (HBP) is associated with an increased likelihood of end-stage renal disease, cerebrovascular disease, coronary artery disease, and retinopathy in individuals with diabetes.[3] An important public health strategy for decreasing morbidity and mortality in the diabetic population is to identify and control hypertension, when present, in addition to the usual care for diabetes. Despite the improvement in the identification, care, and control of hypertension and diabetes, it is still estimated that less than half the individuals with diabetes and hypertension have their HBP adequately controlled.[4]

Particular characteristics shared by these patients influence difficulty with long-term control: obesity (each condition is greater than twice as prevalent in obese as contrasted to nonobese individuals), the need for dietary alteration in addition to weight control, the need for appropriate physical activity, and the need for long-term adherence to pharmacological treatment. Thus, a variety of complex behavioral changes are important to long-term control.

## Treatment

Given the high prevalence of coexisting hypertension and diabetes, it is justifiable to treat these diseases at the public health level. Such an approach needs to consider the distribution of the problem in different populations, the characteristics of chronicity, and the required life-styles changes. In particular, there is considerable opportunity for public, patient, and professional education to enhance the identification, care, and control of these coexisting problems.

The following recommendations are offered in this vein:

- **Enhanced identification, care, and control of HBP in patients with diabetes at both the public health level and at the individual treatment level.** Particular emphasis should be given to high-risk communities and to subpopulations at increased risks of not being aware, in care, or under control, such as young males. Approaches targeted for such groups have proved effective in enhancing patient access to care and control.[5]
- **State-of-the-art patient and professional education to enhance long-term adherence to treatment and control of hypertension and diabetes.** Evidence indicates that inadequate long-term adherence to treatment is the single most important factor related to adequate control at the community and population level. The components of the regimen for the control of hypertension and diabetes include dietary changes for weight control, appropriate fat and carbohydrate intake and avoidance of excess salt, adherence to physical activity and exercise recommendations, appropriate continuity of care, compliance with drug prescriptions, and selected self-monitoring behaviors. Behavioral education strategies effective in enhancing adherence to treatment have been developed and tested, and these can be incorporated into a variety of practice types or into the daily circumstances of a variety of patients.[6,7] Most important, there is evidence that such efforts can decrease morbidity and mortality.[8]
- **Adherence to long-term therapy is improved when the regimen is simplified and clarified.** Approaches for control of hypertension and diabetes should be coordinated. New self-care practices (for example, diet and exercise monitoring) should be introduced in segments and in order of priority. Patients benefit from specific and understandable written instructions regarding diet and exercise plans, medications and their common side effects, and strategies for anticipating and coping with high-risk nonadherence

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situations. By asking patients to state their understanding of the treatment requirements and the problems they anticipate with adherence, clinicians can clarify the regimen and provide specific help in incorporating the regimen into patients' daily schedule. It is particularly important that patients understand the difference between cure and control[7–9] and that they be told their actual blood pressure and blood sugar levels. Agreement between provider and patient on goal levels for blood pressure and blood sugar is important to long-term compliance. Misconceptions (such as being able to know when one's blood pressure is elevated) also should be addressed.

• **Contracts with patients, family support, targeting special goals, and contingent rewards promote adherence, as do special medication packaging, labels, and reminder charts.**[10] Mailed reminders or telephone calls to patients who miss appointments may help them to keep the appointments.[11] Of particular importance is education of family members. This has been demonstrated to be effective in improving adherence to dietary, appointment-keeping, and medication-taking behavior.[6,8,12]

• **Periodic assessments should include a review of patient progress toward therapeutic goals and positive reinforcement of patient self-care achievements.** Patients need to be encouraged to ask questions or to discuss concerns about their treatment regimens. Adherence to a regimen is likely to be enhanced by experiences that increase and reinforce patients' sense of efficacy or personal mastery.

• **The inclusion of patient home monitoring of serum glucose levels and blood pressure in the self-care regimen may enhance long-term adherence and control.** Self-monitoring may be used to encourage patients to rely on objective test results as the basis for subsequent actions rather than on less accurate subjective sensations to estimate serum glucose levels and blood pressure. Self-monitoring also provides an objective means of evaluating the effectiveness of interventions designed to keep serum glucose levels and blood pressure within normal limits. It is a potentially powerful tool for increasing patient understanding of the therapeutic regimen and encouraging active patient participation in achieving the desired health outcomes.[13,14] These positive effects on adherence are enhanced by handy and easy-to-use materials for recording test results, by regular feedback from the health professional about the results, and by the patient knowing that the measurement procedure and results will be evaluated periodically.

• **Coordination with public health facilities, worksites, and community or hospital-based health education programs may be helpful.** Such programs can emphasize the importance of long-term control and can help in long-term monitoring. Patients' awareness of blood pressure or serum glucose levels can be increased, thus reinforcing their agreement with their health care provider on achieving these goals. Clinicians can clarify patients' specific regimens and provide guidance in incorporating the regimens into daily habits. Coordination of community control programs for HBP and diabetes mellitus may provide a more efficient and effective core approach. Similarly, coordination of multidisciplinary approaches and the contributions of physicians, nurses, dieticians, exercise specialists, health educators, and pharmacists are to be encouraged.[15]

## Conclusion

The economic burden of chronic disease is substantial. In many settings, diabetes mellitus and hypertension represent the most commonly encountered combination of diseases. Long-term adherence to a carefully prescribed and maintained therapeutic program oriented toward ambulatory care and self-care, and the judicious use of home care can prevent the need for more expensive inpatient hospital services. Physicians and other health care professionals need to be aware of the economic issues in providing optimal long-term care in a cost-effective manner.[9]

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# Diabetes Mellitus and Hypertension: Clinical Perspective

*THADDEUS E. PROUT MD*

**About half of diabetic patients are estimated to have hypertension; concurrence of the two disorders compounds risk of further morbidity and death. In treating the hypertensive diabetic patient, the goals are to prevent increased morbidity and to postpone mortality most effectively at the lowest cost to the patient. Nonpharmacologic therapies form the foundation of all treatment. Pharmacologic therapy requires not only a thorough knowledge of hypotensive drugs but also of their effects on carbohydrate and lipid metabolism as well as confounding effects on diabetes-related complications.**

The frequency of hypertension in both Type I (insulin-dependent) and Type II (noninsulin dependent) diabetes increases with the age of the patient and the duration of the disease, but the relative risk for hypertension in diabetes compared to the general population is greatest in the younger age group.[1] Among diabetic patients in Maryland, 50 percent are estimated to have hypertension overall (Table 1).[2] Concurrence of the two disorders compounds the risk for the occurrence of other comorbid states as well as for death.[3] These ominous facts should not obscure the recent evidence that maintenance of normal levels of arterial blood pressure in diabetic patients both reduces the progress of renal disease[4] and postpones death.[5]

Risk factors for the macrovascular complications in patients with hypertension and diabetes include all the risks common to the nondiabetic population. The highest risks by far for cardiovascular morbidity and mortality, in addition to hypertension, are smoking and hypercholesterolemia. To these are added family history, stress, obesity, alteration of other blood lipids, and elevated blood glucose. Glucose control remains the risk factor of first importance, however, for microvasculopathy in the diabetic patient.

## Neuropharmacological Therapies

Since the goals in treating the hypertensive diabetic patient are to prevent increased morbidity and to postpone mortality in the most effective manner with the lowest cost to the patient, nonpharmacologic therapies are the foundation for treatment. These include the optimal use of diet and exercise as the initial components for weight management as well as for the management of abnormal blood lipids and glucose.[3] Along with full therapeutic attention to the correction of weight problems, nutritional faults, smoking, alcohol excesses, and proper exercise, studies to rule out all surgically remedial causes of hypertension should be considered. This is particularly important in this group of patients, since signs and symptoms often associated with diabetes may be clues to the existence of a correctable underlying cause for hypertension (Table 2).

Although the likelihood of finding a remedial cause for hypertension is low, the importance of effecting a surgical cure is measured in years of risk prevention. It has been stated that there is a low incidence of renovascular disease with malignant hypertension in diabetes, but Ritz and co-workers[6] have found in patients with atherosclerotic renovascular disease, 10 out of 20 had impaired oral glucose tolerance test (OGTT) and two had noninsulin dependent diabetes. Similarly, results of nonpharmacologic therapies frequently are disappointing, but success is greatly enhanced when maximal efforts at behavioral change and health habits are taught by a health care team. In patients not adequately controlled despite these efforts, hypotensive drug therapy must be started.

The interrelationships of cause and effect between elevated blood glucose and elevated blood pressure are not clear. In the Tecumseh studies,[7] patients with hypertension (as well as those with other forms of cardiovascular disease) had a higher prevalence of glucose intolerance than did the normal population. Although the prevalence of hypertension increases with age and diabetes at a faster rate than in the normal population, hypertension frequently precedes the diagnosis in Type II diabetes, and it is difficult, therefore, to invoke glucose intolerance as the cause of the hypertension. On the contrary, insulin resistance has been described in

**Table 1. Prevalence of Hypertension Among Persons With and Without Diabetes Mellitus and Relative Risk of Hypertension by Age, United States, 1980**

| Age | With DM (percent) | Without DM (percent) | Relative Risk (percent) |
|---|---|---|---|
| 20–44 | 28.6 | 7.6 | 3.8 |
| 45–64 | 47.3 | 21.5 | 2.2 |
| 65+ | 52.6 | 31.9 | 1.6 |

*Source:* Maryland Center for Health Statistics, Maryland Department of Health and Mental Hygiene, 1985.

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**Table 2. Correctable Forms of Hypertension**

| Condition | Clues to Condition |
|---|---|
| **Cushing's syndrome** | Characteristic appearance, hyperglycemia, osteoporosis, hyperadrenalcortism |
| **Primary hyperaldosteronism** | Recurrent tetany, weakness, low serum potassium, alkaline urine, nonsuppressive aldosterone secretion, and low PRA |
| **Pheochromocytoma** | Palpitation, intermittent HBP, headache, hyperglycemia, increased urine catecholamines |
| **Unilateral renal disease** | Hypertension under age 30, abrupt rise in BP, increase in PRA, discrepancy in kidney size, renal artery stenosis |
| **Coarctation of the aorta** | Significant differences in blood pressures between arms or arms and legs, characteristic radiologic evidence |

patients with hypertension independent of either obesity or glucose intolerance.[8]

Because there has been little evidence for high levels of plasma renin activity (PRA) in patients with diabetes and hypertension, it has been generally assumed there is little reason to implicate the renin-angiotensin-aldosterone reaction in the so-called essential hypertension of diabetes.[9] Recent publications summarized by Ritz and co-workers[6] indicate that elevated levels of angiotensin II may occur in association with hyporeninemia possibly due to increased converting enzyme in diabetic patients. Mechanisms involving an altered extracellular volume as well as sodium retention in insulin-treated patients also could explain the increased prevalence of hypertension in the diabetic population.[10]

## Stepped Cure

The final report of the Working Group on Health Education and Hypertensive Control[11] carefully describes the stepped-care approach to the treatment of hypertension in diabetic patients. This comprehensive program gives excellent general direction, but some perspective to the relative significance of the complications encountered in the use of hypertensive drugs in the diabetic patient and a working model of specific recommendations may be useful as a starting point for more individualized treatment.

Treatment of the diabetic patient with hypertension requires not only a thorough knowledge of the hypotensive drugs but also their effects on carbohydrate and lipid metabolism as well as their confounding effects on the other diabetes-related complications. For example, it is well known that beta blockers decrease cardiac contractility and reduce cardiac output, but it is not always recognized that cardiac failure is more likely to occur with the use of these drugs in diabetic patients because of underlying cardiac myopathy. A comprehensive review of common complications of these drugs has been published recently.[12] Since it is impossible to instruct patients in all possible complications, it should be emphasized that medications be used only as directed and that the physician be notified of any problems that may arise. Since the effects of these drugs on blood pressure may vary throughout the day, it is also wise (whenever possible and feasible) to instruct patients in self-monitoring of blood pressure and to review these records at the follow-up appointment.

## Use of Hypotensive Medications

The expense of drug therapy must be considered in the treatment plan for each individual. Cost can be a deterrent to compliance; without compliance therapy will fail. Shulman *et al.*[13] documented that, among moderate to severe hypertensive patients on medication whose blood pressure is not controlled, a larger percentage reported economic barriers to getting medical care and getting prescriptions refilled than did their counterparts with mild or controlled hypertension.

A basic principle to be considered is that treatment should be started in patients with diabetes at somewhat lower diastolic blood pressures than may be generally practiced in the population at large. Treatment should begin with diastolic blood pressures of 90 mm Hg. A logical starting place in such patients is the use of a thiazide diuretic with appropriate precautions against hypokalemia and orthostatic hypotension, especially in patients over 60. This is followed by a beta blocker or other adrenergic inhibitory agent and, if necessary for further control, a vasodilator drug. This drug regimen is relatively inexpensive, effective, and easily con-

trolled, but despite this, it is prudent to address the common concerns in the use of these medications.

Use of diuretic drugs as the first step in blood pressure control merits comment. Deterioration of blood glucose control is never a problem in insulin-treatment patients since effective control of blood glucose can be maintained by insulin increase. Elevations of serum cholesterol as a result of drug intervention may require both a change of medication and/or a review of cholesterol intake. Hypokalemia usually is prevented by early addition of potassium, which is discontinued if not needed. Loop diuretics are preferred in patients with azotemia, and both potassium or potassium-sparing drugs must be used with caution. In general impotence is of less concern to the patient and the physician than is hypertensive control, but a search should be made for effective medications that cause the least difficulty.

If control is not adequate, some form of sympathetic inhibition is generally added as a second step. Orthostatic problems created by diuresis and reduction of blood volume may be increased by the effect of sympathetic inhibition on the autonomic neuropathy commonly found in diabetic patients. Reserpine is less expensive than many other drugs and can be very effective in relatively small doses. Generic beta blockers should be proved inadequate before prescribing the newer, more expensive variations. As noted, evidence of decreased myocardial contractility may require full digitialization as a necessary precaution to use of beta blockers. Reliance on cardioselective beta blockers does not obviate these precautions. Hypoglycemic unresponsiveness in patients receiving beta blockers often is cited as a contraindication for their use, but all patients on hypoglycemic agents should be taught home glucose monitoring so that day-to-day problems of glucose control can be recognized and prevented.

Vasodilation is an effective third step in blood pressure control when needed. For this purpose, hydralazine is an effective and less expensive vasodilator than newer medication. When vasodilator drugs are used as the third step in therapy (after diuretics and beta blockers have been given in optimal doses), they are less likely to aggravate coronary artery disease than when used as the starting drug. Angiotensin converting enzyme (ACE) inhibitors and calcium channel blockers have some theoretical advantages over thiazides and beta blockers as first-line drugs in mild hypertension, but careful monitoring of these drugs is important. One must become thoroughly familiar with their common side effects.

With moderate hypertension and diastolic pressures at 110 ± 5 mm Hg, an ACE inhibitor often can be more effective than the adrenergic inhibitory drugs. Since these two agents are likely to be synergistic in their effects, it is common practice to substitute the one for the other as step two. Prazosin or minoxidil as effective vasodilators can be substituted for hydralazine, if necessary.

Most patients with diastolic pressures of 115 mm Hg or higher and all patients with malignant hypertension, need hospitalization. Observations under carefully controlled conditions as drugs are shifted to develop the optimal regimen make this mandatory. While it is recognized that drugs and dosage established in hospitalization may not be totally applicable after discharge, the safety to the patient, the time saved achieving control, and the opportunity for behavioral indoctrination give a therapeutic advantage that cannot be successfully disputed except by the most penurious of the health cost regulators.

Present guidelines recommend that isolated systolic pressures ≥160 mm Hg be treated in patients at least to age 65. The more exaggerated effects of volume depletion in older patients frequently result in serious postural hypotension. In such patients the theoretical but unproved future benefits of therapy need to be carefully weighed against the possible disadvantages.

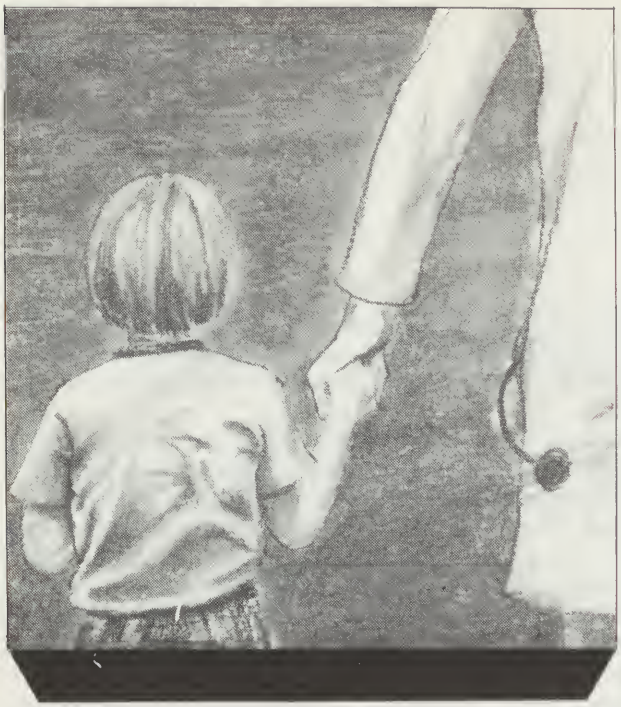
Treatment of patients with hypertension in association with renal disease require special consideration. Renal failure is likely to be accelerated in diabetic patients with proteinuria in the presence of hypertension.[4] New information concerning the role of angiotensin II in the cause of hypertension in diabetes despite low plasma renin activity has increased interest in the use of ACE inhibitors in these patients.

These drugs have been shown not only to effectively reduce systemic hypertension but also to rapidly reduce proteinuria.[14] This is consistent with the hypothesis that this effect is brought about by the decrease in intraglomerular capillary pressures and with the clinical observations on the importance of aggressive treatment of hypertension in diabetic patients.[4]

Supine hypertension with orthostatic hypotension is perhaps the ultimate test of therapeutic ingenuity. Generally, therapy is directed toward stabilizing blood volume in order to combat hypotension when standing and toward using gravity during the hours of rest to minimize the rise of pressures in the horizontal position. Use of sodium-retaining hormone (fluorinef) and thigh-high elastic hose during the day along with short-term vasodilators and elevating the head of the bed at night are the working components of the most successful combination of therapies for this difficult problem.

## Conclusion

Treatment of hypertension in the diabetic must be undertaken with the conviction that one has begun a



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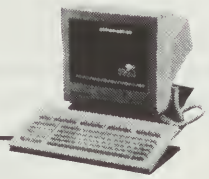
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course of action that is more likely to prolong useful life (at this stage of the diabetic's disease) than is effort expended solely on metabolic control. Combined control of glucose levels and blood pressure involves detailed instructions and compliance, home monitoring, and careful selection among available drugs for the optimal therapeutic combinations. Nowhere in medicine is the physician more dependent on the support of a health care team than in the control of the complicated diabetic patient. The ultimate reward is a program of successful therapy.

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# Improving Adherence to Treatment Regimens

*DONALD O. FEDDER PharmBS, DrPH*

**Physicians can help patients improve adherence to prescribed regimens by identifying their individual needs for information and by offering support and reinforcement at office visits.**

Death rates for stroke and coronary heart disease have been declining for most of the last half of this century and have declined more steeply since 1972, the date marking the beginning of national efforts to control blood pressure. Compared to 1972 data, stroke deaths were down by about 50 percent and coronary heart deaths by almost 35 percent by 1985.[1]

Certainly these are encouraging statistics. Blood pressure control is recognized as having made a major contribution to these trends. However, many hypertensives do not stay on therapy; those who do stay on therapy, do not necessarily control their blood pressure. Patients' poor adherence has been widely identified as a major problem in the control of hypertension. About half of all treated hypertensive patients discontinue their therapy within one year. The proportion of patients who adhere to therapy over the years and succeed in reaching and maintaining goal blood pressure continues to lag behind rates for awareness, detection, and initiation of therapy. The common perception that remarkable progress in decreasing premature death and disability from cardiovascular disease (CVD) could be achieved if only patients would comply with their therapy regimen belies the great complexity involved.

The Patient-Practitioner Behavioral Model illustrates the complexities in even the most simple of chronic therapy regimens, one-tablet-a-day therapy (Figure).[2] In the example, a patient initiates a physician visit. The physician examines the patient, prescribes 30 tablets of a drug to be taken once daily, authorizes one refill, and instructs the patient to return in 60 days for reevaluation. The patient must accept the prescription, take it to a pharmacy to be filled, take a tablet each day, and have the prescription refilled in a timely manner so that he/she will continue to take the tablets for an additional 30 days (until the next appointment). The patient then must make the appointment and keep it. If all goes well, there are 65 separate tasks that the patient must perform during the long period (60 days) between doctor visits. One cannot assume that all these tasks will be performed.

Studies have shown that as many as 30 percent of prescriptions written are not filled by patients. Scrutiny of pharmacy "will-call" bins reveals many prescriptions that were not picked up by even well-intentioned patients. There is also evidence that most refillable prescriptions are not refilled. An unpublished survey of 118,000 prescriptions in five pharmacies found that 79 percent of the refillable prescriptions had not been refilled. Although this is a "quick-and-dirty" retrospective review of computer records, it is consistent with anecdotal reports and provides a strong indication that patients do not necessarily have their prescriptions refilled even when authorized; those who do, fail to have their prescriptions refilled on time.

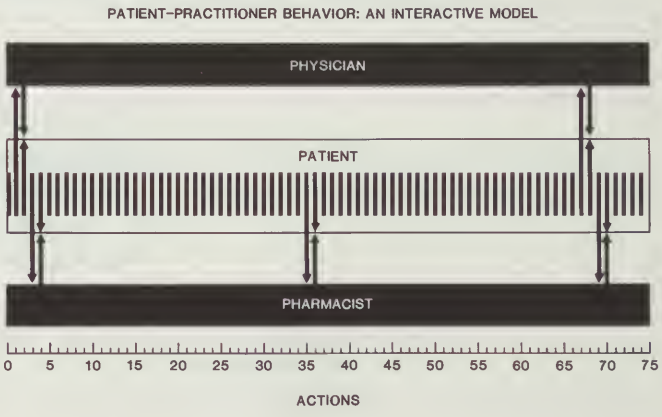
Making and keeping appointments with busy practitioners can present problems for many patients. Even the simplest chronic-care regimen can be difficult for some patients. The "burden" of therapy adherence is borne primarily by the patient during those relatively long unsupervised periods between physician visits. Providers need to be more sensitive to patients' needs and implement strategies and systems to help their patients with the problem of adherence.

## Overview of Related Research

To understand how to get patients to follow their doctor's advice, the National Heart, Lung, and Blood Institute (NHLBI) sponsored clinical trials that demonstrated the benefits of planned health education programs for hypertension control. If applied to today's office practice, these health education strategies could improve patient adherence and long-term blood pressure control, thus reducing stroke mortality even further.

Research studies and clinical experience provide compelling evidence that hypertensive patients improve both their adherence to prescribed regimens and to

**Figure.** Patient-Practitioner Behavioral Model




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their continuity of care when practitioners identify specific needs for information as well as support and reinforce patients' progress at every visit. Consider the following:

- An educational program of 400 ambulatory patients at a major teaching hospital compared the difference in HBP control rates between those patients who did and those patients who did not receive *educational interventions*. Rates for blood pressure control among patients who received a combination of educational interventions increased by 29 percent, while control rates among those who received no educational interventions remained unchanged. Although the program included a 15-minute individualized counseling session in which the practitioner clarified and emphasized the regimen, a shorter, well-targeted intervention certainly could be substituted. The program also involved instructional reinforcement with an adult with whom the patient had the most frequent contact.[3]
- In a 5-year follow-up study, Moriskey *et al.* showed that 53 percent of patients who received a combination of family support and an exit interview reinforcing the need for BP control reported adherence to the prescribed drug regimen, compared to 40 percent adherence among patients who received no such intervention. This increase correlated with a significant increase (65 percent) in blood pressure control over the 5-year period. Moreover, this type of planned patient education sequence can result in increased patient satisfaction, agreement between patient and physician, and reduction in morbidity and mortality due to hypertension.[4]
- Studies of patient adherence indicate that the treatment of a chronic disease such as HBP must consider the individual's *beliefs and understanding* of the disease and its treatment. Misconceptions and lack of understanding of recommended behavior changes have been found to interfere with adherence. Correcting these misconceptions is critical to improving adherence to therapy.[5]
- Attention to patient *convenience* has been found to improve patient adherence. Willingness to accommodate the patient's life-style by adjusting the prescribed regimen is important to continued cooperation with treatment.[6]
- Several studies have demonstrated that the amount of *social support* a patient receives is strongly correlated with adherence to treatment. Mobilizing the social support of the patient is identified as contributing to high or adequate adherence with treatment recommendations.[7,8]
- Results of individual studies and comprehensive reviews of the literature on patient education reveal that the use of a *combination of strategies* is likely to achieve the greatest improvement in adherence to therapy in blood pressure outcome among treated patients.[9,10]

The National Heart, Lung and Blood Institute recently published *The Physician's Guide: Improving Adherence Among Hypertensive Patients*, developed by the Working Group on Health Education and High Blood Pressure.*[11] The Working Group, clinicians and researchers with expertise in the treatment and control of HBP, was charged with "delineating state-of-the-art patient educational practices necessary for long term control of HBP."

The group recognized that some patient decisions and actions resulting in nonadherence are beyond the physician's control, but he or she can take important steps to increase the likelihood that patients will follow the recommended therapy for hypertension. The *Guide* is designed to help practitioners manage the problem of inadequate adherence to treatment and follow-up that affects the majority of treated hypertensives; its suggestions are equally applicable to control of other chronic diseases. The approach emphasizes actions and systems under the control of the physician that have been shown to increase the proportion of patients who achieve and maintain goal blood pressure. It is based on the influence the physician has over factors such as:

- the information the physician gives to patients: its content, completeness, and relevance to the individual
- the quality of physician interactions with patients and the manner in which problems that interfere with compliance are managed
- office procedures that reinforce appropriate patient behaviors

Research studies and clinical experience indicate that certain methods are more helpful than others in increasing adherence to prescribed regimens and promoting continuity of care. As a result, the *Guide* recommends the use of three basic strategies to increase adherence.

1. *Correct patients' misconceptions about the regimen.* Correct inaccuracies, add factual information about hypertension, clarify the rationale for the specific changes requested, and emphasize the goal and duration of treatment. The purpose is to eliminate misinformation that patients might use as a basis for self-adjusting the regimen or dropping out of treatment.

2. *Adjust the intervention to patients' life-styles.* Express willingness to modify drug dosages or frequency

*David M. Levine MD, vice-chairman of the Commission, was chairman of the Working Group at the NHLBI.

or to change medication and solve other practical problems that make the regimen incompatible with patients' daily routine, home life, work schedule, or tolerance of side effects.

3. *Enhance support from family members.* Identify and involve one influential person (preferably someone living with the patient) who can provide encouragement, help support behavior changes, and, if necessary, remind the patient about specifics of the regimen.

These strategies are the basis for achieving five of the most frequent behavior changes required of hypertensive patients: taking medication daily, achieving and maintaining desirable weight, reducing dietary sodium, increasing exercise, and moderating alcohol consumption. (The *Guide* does not deal with a sixth behavior, smoking cessation; the National High Blood Pressure Education Program (NHBPEP) has published *Clinical Opportunities for Smoking Intervention: A Guide for the Busy Physician.*

*The Physician's Guide to Improving Adherence* suggests ways to incorporate these strategies into ongoing patient education activities. It offers ways to prevent initial adherence problems by showing how to identify and clarify common misunderstandings and concerns that interfere with therapy. It suggests ways to identify common barriers to adherence and shows how to tailor interventions accordingly. It also presents alternate solutions for adherence problems that continue despite use of the basis strategies. In addition, the guide suggests administrative procedures to institute within the medical practice to enhance adherence. Included in appendices are a resource listing for patient education materials, guidance for interpreting nutrition labels, and a sample medication calendar.

Copies of *The Physician's Guide: Improving Adherence Among Hypertensive Patients* and *Clinical Opportunities for Smoking Intervention* are available at no cost from: National HBP Education Program, 120/80 National Institutes of Health, Bethesda, MD 20892.

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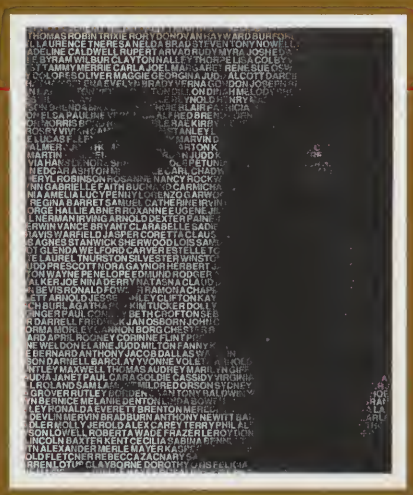
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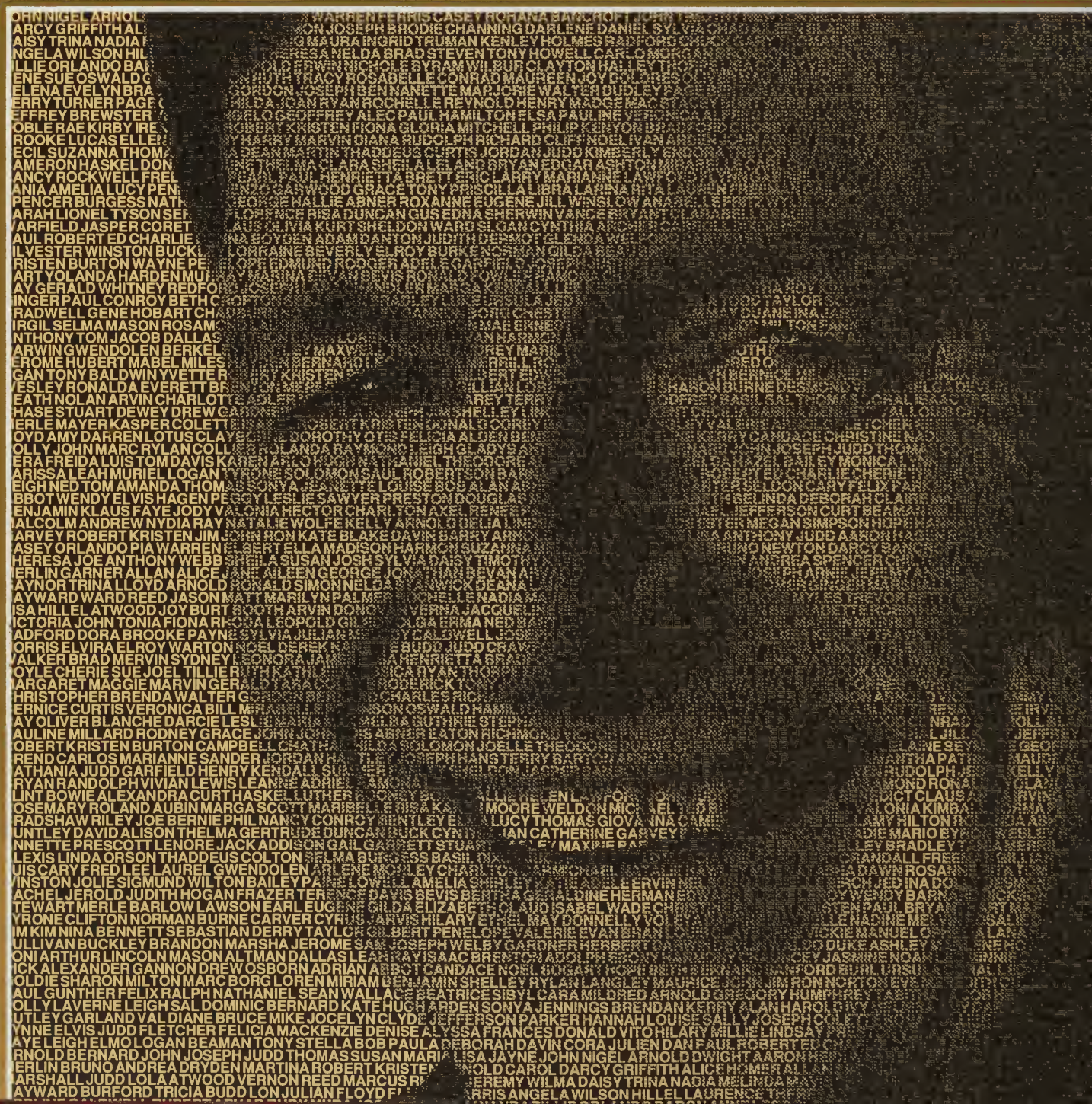
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INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

**INDICATIONS AND USAGE. Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

**Angina Pectoris Due to Coronary Atherosclerosis:** INDERAL LA is indicated for the long-term management of patients with angina pectoris.

**Migraine:** INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

**Hypertrophic Subaortic Stenosis:** INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

**CONTRAINDICATIONS.** INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

**WARNINGS.** CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

**Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)**—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing $T_4$ and reverse $T_3$, and decreasing $T_3$.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

**PRECAUTIONS.** GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

*Aluminum hydroxide gel* greatly reduces intestinal absorption of propranolol.

*Ethanol* slows the rate of absorption of propranolol.

*Phenytoin, phenobarbitone,* and *rifampin* accelerate propranolol clearance.

*Chlorpromazine,* when used concomitantly with propranolol, results in increased plasma levels of both drugs.

*Antipyrine* and *lidocaine* have reduced clearance when used concomitantly with propranolol.

*Thyroxine* may result in a lower than expected $T_3$ concentration when used concomitantly with propranolol.

*Cimetidine* decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

*Theophylline* clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS.** Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

*Cardiovascular:* Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

*Central Nervous System:* Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

*Gastrointestinal:* Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

*Allergic:* Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

*Respiratory:* Bronchospasm.

*Hematologic:* Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

*Auto-Immune:* In extremely rare instances, systemic lupus erythematosus has been reported.

*Miscellaneous:* Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

**DOSAGE AND ADMINISTRATION.** INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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# Role of Hypertension in Diabetic Renal Disease

*W. GORDON WALKER MD, JUDITH HERMANN, TIMOTHY CODD, and R. PATTERSON RUSSELL MD*

**A preliminary analysis of data from a longitudinal study of the impact of hypertension on renal function in diabetes mellitus reveals a significant association between presence of persistent systolic hypertension during treatment and more rapidly progressing renal impairment. Preliminary observations during the first 24 months of follow-up suggest that hypertension is an important risk factor for accelerating diabetic renal damage in both insulin-dependent and noninsulin-dependent diabetes patients.**

Diabetes mellitus and hypertension are common chronic disorders that frequently coexist and often exert a major effect on health care needs and clinical outcome in the afflicted individual. Over 2.5 million persons in the United States have coexistent hypertension and diabetes mellitus; elevated blood pressure is more than twice as common in persons with diabetes mellitus as in those without.[1,2] However, the prevalence of hypertension varies significantly with the type and duration of diabetes mellitus, age, race, sex, and, in particular, the presence of diabetic nephropathy.

Diabetic nephropathy, which occurs in more than one in every three persons with insulin-dependent diabetes mellitus (IDDM) and about one in five persons with noninsulin-dependent diabetes mellitus (NIDDM) after the duration of diabetes exceeds 15 years, is an important cause of high blood pressure.[1-3] The degree to which this hypertension of renal origin is commingled with essential hypertension (particularly in NIDDM) has not been determined.

Diabetic nephropathy is a leading cause of end-stage renal disease currently accounting for about a quarter of new entrants into maintenance dialysis programs. In the 60 to 75 year age group it contributes approximately a third of new dialysis candidates.[3] Much attention has been focused on careful control of blood glucose as a means of reducing microangiopathic complications of diabetes. While reports of studies employing continuous insulin infusion have established that blood glucose can be controlled within a range that approximates the normal, beneficial effects of this control on microangiopathic changes in the kidney and eye have been difficult and often impossible to demonstrate.[4-7] Most such studies have focused on Type I or IDDM. Noninsulin-dependent diabetes mellitus has received much less attention even though the data (age at entry into dialysis) on the National End-Stage Renal Disease program as reported by the Health Care Financing Administration suggest that Type II (or NIDDM) may constitute a majority of these patients entering dialysis. This inference is based on the average age at entry into dialysis, since the data on type of diabetics among dialysis subjects are incomplete in the end-stage renal disease data base.[3] A recent report from the University Group Diabetes Program indicates that careful control of blood sugar in this group is no more effective in preventing progressive renal damage than has been the case with IDDM.[8]

Although these failures to improve microangiopathic complications with careful glucose control may be only a reflection of treatment that is too late or represents introduction of effective control only after extensive microangiopathic damage is present, they nevertheless underscore the importance of evaluating all potential risk factors in the search of ways to reduce the morbidity and mortality attributable to diabetes mellitus.

## A Longitudinal Cohort Study

The increased risk of cardiovascular morbidity and mortality exhibited by diabetics is well-recognized, and the greater prevalence of hypertension among diabetic subjects prompted the initiation of the present longitudinal study of a cohort of diabetic subjects. We present some preliminary findings from this cohort that have strong therapeutic implications with regard to management of hypertension in the diabetic subject.

## Methods

One hundred thirty-one patients initially were enrolled after referral for screening from an Ophthalmology Clinic. The ophthalmologist referred on the basis of the presence of early diabetic retinopathy and had no knowledge of the patient's blood pressure or renal status at the time of referral. All patients with clinical renal involvement at the time of initial referral have been excluded from the present analysis. History and physical examination at entry were obtained on all subjects. They were then classified as IDDM (Type I) or NIDDM (Type II) according to currently accepted criteria.[9] Since withholding of any hypertensive therapy cannot be ethically justified because of the well-recognized risks associated with failure to treat hypertension,[10] the study was designed as an observational one

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and responsibility for treatment of hypertension (if present) and management of the patient's diabetic care remains with the patient's primary physician.

Patients were seen at intervals of every six months for history, physical examination, medication inventory of regularly scheduled drugs, and standardized measurement of blood pressure in the supine, sitting, and erect positions together with indicated laboratory tests. The primary physician was informed of the objectives of the study and received the results of each semiannual visit. All followed their usual practices in management of the hypertension. Sequential data available for analysis included interval history and physical examinations, blood pressure measurements, plus measurements of serum creatinine and beta-2 microglobulin as indicators of renal function. Analytic methods employed were those previously published from the author's laboratory.[11–14] Changes in serum creatinine and beta-2 microglobulin were used as indicators of change in renal function.

The impact of elevated blood pressure was assessed by classifying treated patients according to the success or failure of treatment since collection of control data on untreated hypertensive diabetic subjects for the period of time represented by this preliminary report could not be ethically justified. In this classification of blood pressure we have modified slightly the recommendation of the Report of the Joint National Committee for Detection, Evaluation and Treatment of HBP (III), which identifies a systolic blood pressure of 139 mm Hg as the upper limit of normal. We have included values of ≤140 mm Hg as normotensive and >140 mm Hg as hypertensive to minimize distortion of our data due to digit preference. Patients diagnosed as hypertensive subjects at entry into the study have been classified for analytic purposes as adequately treated if the average of all supine blood pressures recorded during follow-up yielded a mean supine systolic pressure that was equal to or less than 140 mm Hg. They were classified as persistently hypertensive during follow-up when the systolic pressure so calculated exceeded 140 mm Hg. Inadequately treated HBP was evaluated by comparison of changes in renal function between subjects with adequately controlled or normal blood pressure and diabetics with persistent hypertension despite treatment.

The analysis reported here focuses on data collected during the first 24 months of follow-up and compares renal function and mortality in those individuals whose blood pressure was maintained at levels equal to or less than 140 mm Hg with diabetic subjects whose systolic blood pressure remained above 140 mm Hg despite therapy.

## Results

Data were available for this analysis on 47 patients with insulin-dependent diabetes mellitus (IDDM) and 84 patients with noninsulin-dependent diabetes mellitus (NIDDM). The characteristics at entry did not differ between normotensive and hypertensive subjects in either insulin-dependent or noninsulin-dependent diabetic subjects (Table 1), and hence, the entire cohort was divided according to blood pressure.

Because virtually all patients diagnosed as hypertensive by their physicians were on some form of antihypertensive medication, this longitudinal study does not permit comparison of untreated hypertensives with those under treatment (nor is it possible to justify such a study on ethical grounds since the efficacy of treatment is now well established). Accordingly we have compared the group with normal blood pressure (including those individuals who never had hypertension and individuals whose hypertension had been successfully treated) with subjects whose blood pressure was persistently elevated.

We compare here the first two years of follow-up. The characteristics at entry and the average values for fasting blood sugar and glycosylated hemoglobin are presented in Table 1, and the data are divided according to diabetes type and according to average systolic blood pressure during follow-up. Table 1 also contains the blood pressure recorded at entry for each of the groups. It is worth noting that none of the groups could be characterized as having diastolic hypertension at entry.

**Table 1. Patient Characteristics at Entry**

| | IDDM* | | NIDDM** | |
|---|---|---|---|---|
| | Sys BP ≤140 | Sys BP >140 | Sys BP ≤140 | Sys BP >140 |
| *n* | 31 | 16 | 31 | 53 |
| Data at entry | | | | |
| Age (yrs) | 36 ± 2 | 41 ± 4 | 55 ± 2 | 59 ± 1 |
| Weight (lbs) | 149 ± 5 | 156 ± 8 | 183 ± 6 | 175 ± 4 |
| Duration diabetes (yrs) | 19 ± 1 | 22 ± 2 | 13 ± 1 | 16 ± 1 |
| Sys BP (mm Hg) | 121 ± 2 | 159 ± 4 | 130 ± 1 | 167 ± 3 |
| Diast BP (mm Hg) | 71 ± 1 | 85 ± 2 | 73 ± 1 | 85 ± 1 |
| Creatinine (mg/dl) | 93 ± .03 | 1.1 ± .1 | 1.0 ± .04 | 1.1 ± .08 |
| Triglycerides (mg/dl) | 135 ± 28 | 164 ± 24 | 177 ± 30 | 390 ± 110 |
| Cholesterol (mg/dl) | 206 ± 6 | 231 ± 10 | 242 ± 9 | 253 ± 8 |
| During follow up | | | | |
| Average FBS (mg/dl) | 214 ± 13 | 250 ± 29 | 199 ± 10 | 208 ± 7 |
| Glycosylated Hb (%) | 10 ± .6 | 11.4 ± 1.4 | 9.9 ± .8 | 9.4 ± .9 |

* Insulin-dependent diabetes mellitus
** Noninsulin-dependent diabetes mellitus

Only the systolic blood pressures were above the limits specified by the Joint Committee on Detection and Treatment of Hypertension as the upper limit of normal for blood pressure.

Numbers of subjects in each of the insulin-dependent and noninsulin-dependent subsets were not sufficiently large to support extensive statistical analyses of the two types separately at two years of follow-up. Significant differences between normotensives and hypertensives were identified for the attributes listed in Table 1 including age at entry, duration of diabetes, serum creatinine at entry, weight at entry, cholesterol and tryglyceride at entry, and average fasting blood sugar and glycosylated hemoglobin during follow-up. Accordingly, data from the entire cohort were pooled, and hypertensive subjects compared with those whose blood pressures were persistently normal. When this comparison was made for change in renal function during follow-up as determined either by serum creatinine or by serum beta-2 microglobulins, the data shown in Figure 1 and Figure 2 were obtained. Both plasma creatinine and serum beta-2 microglobulins showed progressive increases during the initial two years of follow-up in the hypertensive group, but no significant tendency to increase was identified for the group whose blood pressure remained normal during follow-up (systolic blood pressure <140 mm Hg).

When sequential data on angiotensin II are examined for normotensive and hypertensive subsets, the hypertensive patients exhibit a significantly higher level of angiotensin II (normotensive 7.6 ± 0.5 pg/ml, hypertensives 10.2 ± 0.8 pg/ml; $p < .008$).[15] Examination of the relationship between creatinine and beta-2 microglobulin as indices of renal function and other variables revealed the correlations presented in Table 2. Both blood pressure and the renin-angiotensin system exhibit significant correlations with the plasma creatinine and beta-2 microglobulin. This significant association between blood pressure and renal function in the diabetic has important implications for treatment.

When the characteristics of the behavior of blood pressure in the treated individuals are examined more closely, it appears that evidence of accelerated loss of renal function with concomitant hypertension is associated for the most part with persistence of only systolic hypertension. The cumulative frequency distributions for diastolic blood pressure in both normotensive and hypertensive subsets are shown in Figure 3. Although

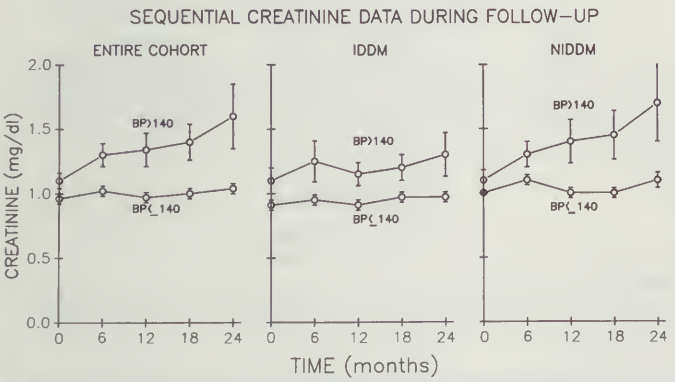



**Figure 1**. Serum creatinine data (mean ± SEM) for first 24 months of follow-up. Graph on left presents data on entire cohort grouped according to average systolic blood pressure during follow-up. Comparable data for insulin-dependent diabetic subjects only are present in the middle graph and for noninsulin-dependent diabetes mellitus in the right graph. The trend toward progressively increasing values for hypertensives is readily apparent, but no such changes are demonstrated for those subjects whose systolic blood pressure remained in the normal range during follow-up. Note that the mean value for serum creatinine at entry did not differ significantly from 1.0 mg/dl for any of the subsets.

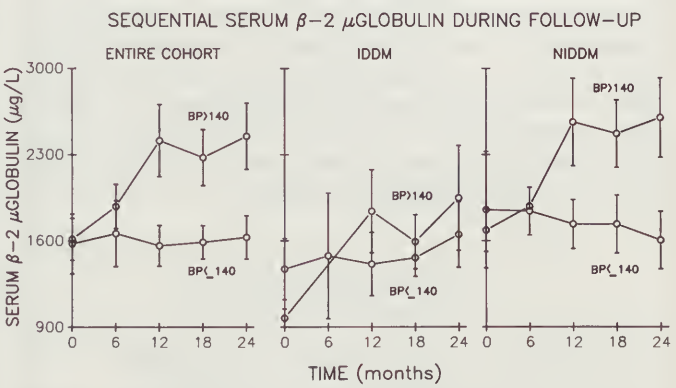



**Figure 2**. Sequential data on serum beta-2 microglobulin during first 24 months of follow-up. These measurements were obtained as an independent evaluation of renal function. These data show the same trends as do the creatinine values when data are pooled for the entire cohort and when noninsulin-dependent subjects are examined. There is not a clear difference between normotensive and hypertensive subsets for insulin-dependent subjects.

**Table 2. Correlations: Renal Function vs Renin Angiotensin System and Blood Pressure**

| | r/p |
|---|---|
| Serum creatinine vs beta-2 microglobulin | +.78/<.001 |
| Serum creatinine vs systolic BP | +.30/<.001 |
| Creatinine clearance vs systolic BP | +.37/<.005 |
| Beta-2 microglobulin vs systolic BP | +.23/<.001 |
| Beta-2 microglobulin vs angiotensin II | +.24/<.001 |
| Serum creatinine vs plasma renin act | +.10/<.05 |
| Systolic BP vs angiotensin II | +.123/<.001 |

there is a clear and consistent difference in diastolic blood pressure distribution between the normotensive and hypertensive subsets, it is equally clear that more than 85 percent of the subjects with persistent elevation of systolic BP (>140 mm Hg) have diastolic blood pressures below 90 mm Hg during follow-up. This finding merits particularly careful attention since it suggests that criteria ordinarily used for adequacy of treatment of blood pressure may not apply to the diabetic. More stringent criteria appear to be desirable when evaluating response to treatment.

## Discussion

In the present study patients with persistent elevation of systolic blood pressure of only modest proportions despite treatment exhibit an accelerated rate of decline of renal function as judged by greater mean increases in both serum creatinine and beta-2 microglobulin over two years of follow-up. These findings suggest that hypertension may play a significant role in acceleration of the decline of renal function and progression of diabetic nephropathy in both Type I and Type II diabetic patients. While association does not prove causality, the well-documented adverse effects that hypertension has long been known to exert upon kidney function makes it likely that the HBP probably exerts a continuing deleterious effect on renal function in the diabetic patient. Since no such progressive impairment was noted in the normotensive group during follow-up, it is reasonable to suggest that the hypertension is making a substantial contribution to this accelerated progression of renal failure.

When the duration of diabetes was compared, no significant difference could be demonstrated between hypertensive and normotensive groups of either insulin-dependent or noninsulin-dependent diabetes. It thus seems unlikely that a longer duration of diabetes accounts for these observed differences. It is also worth emphasizing that the average values for repeated fasting blood sugars and glycosylated hemoglobins obtained during the period of follow-up did not differ from hypertensive and normotensive subjects in either the insulin-dependent or noninsulin-dependent group. This study thus provides no support for the conclusion that differences in diabetic control are responsible for these changes.

While it is undeniable that diabetes is the initiating factor in causing the renal damage, the present study indicates it is likely that hypertension is a major factor in accelerating this kidney damage. These findings are consistent with earlier reports dealing with Type I or IDDM.[16–19] The relationship that also is identified for the renin-angiotensin system suggests that the present recommendations that diuretics be considered as initial therapy in diabetes may need to be reevaluated.[20] It is well-established that diuretics increase levels of renin and angiotensin II. Whether this contributes to the renal damage in any way remains to be determined.

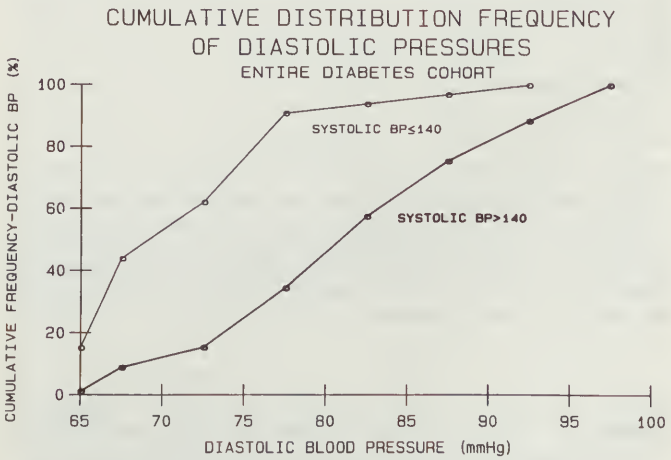



**Figure 3.** Cumulative distribution frequencies for average values for diastolic blood pressures during follow-up. There is a well-defined separation of diastolic blood pressures when the individual whose systolic blood pressure is within the normal range during follow-up is compared with those subjects whose systolic blood pressures were persistently greater than 140 mm Hg. Nonetheless, more than 80 percent of these individuals with persistent systolic hypertension had diastolic pressures that were less than 90 mm Hg. The group considered hypertensive during follow-up represented systolic hypertension only for the most part.


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Sandi Francis, Secretary
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# Prevention of End-Stage Renal Disease: A Focus of Antihypertensive Therapy

*MATTHEW R. WEIR MD and JOHN JOSSELSON MD*

**Persistent hemodynamic alterations related to hypertension frequently can lead to progressive occult systemic vascular damage in a variety of different beds, including the kidney. Data from many studies have demonstrated the ineffectiveness of traditional therapies in reducing the damaging effects of hypertension on the kidney. Angiotensin-converting enzyme inhibitors and calcium entry blockers may have a role in protecting the kidney from glomerular capillary hypertension and progressive nephrosclerosis.**

Ever since Bright, in 1836, associated contracted kidneys with elevation of systemic blood pressure and left ventricular hypertrophy, debate has centered on whether alterations of renal structure or function precede or follow the development of hypertension. We will not dwell on this continuing debate but will identify factors contributing to hypertension and newer concepts in pathogenesis that may help to prevent resultant end-stage renal disease.

Because hypertension is a hemodynamic disorder, its effects on various vascular beds throughout the body need to be monitored. Persistent hemodynamic alterations related to hypertension frequently can lead to progressive, occult systemic vascular damage in a variety of different beds, including the kidney. With respect to hypertensive renal disease, data from the Center for Health Statistics and The National Heart, Lung and Blood Institute[1] have demonstrated that traditional methods for the treatment of elevated blood pressure have had little or no effect in the prevention of mortality from noncardiovascular diseases such as kidney disease (Figure). Other data from Europe[2] similarly have demonstrated a lack of effect of current therapies for reducing the damaging effects of hypertension on the kidney. We present some hemodynamic and experimental observations that may, in part, explain why the treatment of hypertensive renal disease has not been successful.

## Mechanisms Causing Damage

Age and race are two important factors that need to be considered when exploring the mechanisms whereby hypertension progressively damages renal vascular beds. The central hemodynamic mechanisms responsible for elevated systemic blood pressure are becoming better understood despite our limited knowledge of the factors that increase renal vascular resistance in chronic hypertension. The younger patient (under the age of 40) typically displays an elevated cardiac output, normal peripheral vascular resistance, salt-insensitivity, and normal intravascular volumes as the major manifestations of the hypertensive state (Table 1).[3] Higher plasma renin levels and adrenergic activity are also the norm.

In contrast, patients over age 40 tend to have progressive reductions in cardiac output with markedly elevated peripheral resistance as well as a decreased intravascular volume, increased salt-sensitivity, and reduced plasma renin and baroreceptor sensitivity (Table 2).[3] It is believed that these changes occur progressively over time, related to the increased afterload that the heart must continually pump against. A concomitant progressive reduction in renal blood flow and glomeru-

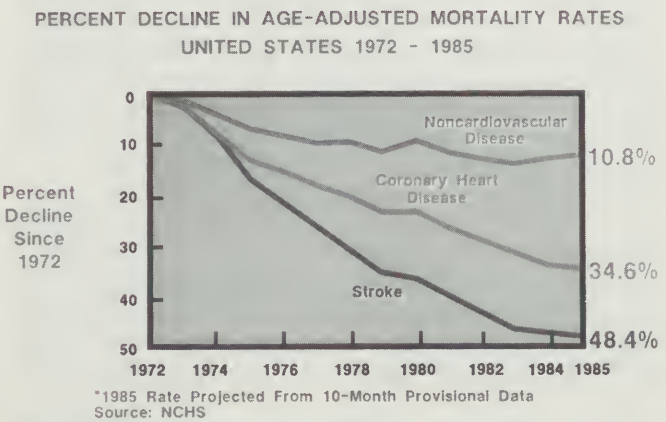



**Figure.** Reduction in mortality due to nonvascular disease, coronary heart disease and stroke.

**Table 1. Physiologic Considerations for Blood Pressure Reduction in the Young Hypertensive**

| Pathophysiologic Findings | Desired Pharmacologic Effects |
|---|---|
| High cardiac output and heart rate | Negative inotropic and chronotropic effect |
| Normal TPR | No effect on TPR |
| Activated renin-angiotensin system | Supression of renin secretion |
| Normal to contracted plasma volume | No effect on plasma volume |

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lar filtration rate also occur with chronicity of elevated blood pressure. The renal vasculature, quite distensible at a younger age, progressively becomes stiffened as the nephrosclerotic processes of aging tend to produce progressively higher resistance. Despite the structural narrowing of vessels that occur with aging, there remains a component of vascular sensitivity that can further reduce renal blood flow independent of these fixed changes.[4] Progressive reduction in renal blood flow and elevated renal vascular resistance thus tend to parallel similar changes seen in nonrenal vascular beds.

### The Kidney's Role

Because of its role in maintaining salt and volume homeostasis, as well as its pivotal role regulating the systemic renin-angiotensin system, the kidney may be a focal point for the hypertensive process, which accelerates the senescense of the systemic vascular tree in addition to its own self-destruction. Blaustein *et al.*[5] have suggested that the inability of the kidney to handle a salt load (either related to diet or functional/anatomic abnormality) leads to the production of a natriuretic hormone with the ability to inhibit cellular sodium-potassium ATPase activity. The net result is increased sodium excretion by the kidney but at the expense of higher smooth muscle vascular reactivity and elevated blood pressure. Other pressure-independent mechanisms may contribute to the destructive process.

Past research has focused on the self-perpetuating cycle in which hypertension tends to increase vascular hypertrophy leading to higher resistance and increasing systemic pressure. Recent experimental evidence suggests that pressure-independent mechanisms also can lead to accelerated vascular hypertrophy. Several factors including angiotensin II and norepinephrine have been implicated as potential vascular smooth muscle mitogens.[6] Recent data suggest that agents that can block hormones at the level of vascular smooth muscle may blunt certain pathologic vascular adaptive events particularly in the kidney itself.[7]

**Table 2. Physiologic Considerations for Blood Pressure Reduction in the Elderly Hypertensive**

| Pathophysiologic Findings | Desired Pharmacologic Findings |
|---|---|
| Low cardiac output and heart rate | Afterload reduction |
| High peripheral vascular resistance | Physiologic vasodilatation |
| Contracted total blood volume | Restore appropriate vascular volume and improve tissue perfusion |
| Decreased adrenergic activity, salt sensitivity | Natriuretic effect |
| Left ventricular hypertrophy | Regression of LVH |
| Nephrosclerosis and impaired renal function/renal blood flow | Improve renal blood flow |

### Race as a Determinant

Race is another important determinant in the prevalence and severity of hypertension. Data from the National Center for Health Statistics demonstrated that the prevalence of hypertension among blacks is 38.2 percent compared with 28.8 percent among whites.[8] These data are further underscored by the strikingly higher rate of fatal stroke, ischemic heart disease, and end-stage renal disease seen in the black population.[9]

Explanations for these differences remain obscure, although certain hemodynamic patterns and trends appear to distinguish black from white hypertensives. The black hypertensive often tends to have the lower cardiac output, elevated peripheral vascular resistance, increased salt-sensitivity, and reduced renal blood flow characteristic of the elderly hypertensive (Table 3).[3] In contradistinction to the elderly patient, however, the black patient with HBP tends to be euvolemic or only slightly volume expanded.

The hemodynamic similarity between the black and the elderly hypertensive may in part explain why the increased risk of end-organ disease occurs in both groups. An elevated vascular responsiveness to circulating neurohormones with a potential risk for accelerated vascular damage may be another possible explanation. No specific genetic factors have been identified to account for the observation that hypertension in the black population tends to be more severe, although Dahl's studies using inbred rat strains suggest the possibility. Researchers have noted increased urinary sodium to potassium ratios in a group of black hypertensives, as well as reduced natriuretic vasodilatory prostaglandins and kinins, and diminished sympathetic

**Table 3. Physiologic Considerations for Blood Pressure Reduction in the Black Hypertensive**

| Pathophysiologic Findings | Desired Pharmacologic Effects |
|---|---|
| Low cardiac output | Afterload reduction |
| Tendency toward expanded plasma volume | Natriuretic effect |
| High peripheral vascular resistance | Physiologic vasodilatation |
| Decreased renin activity, salt sensitivity | Natriuretic effect |
| Decreased renal blood flow | Increased renal blood flow |

nervous system function as possible contributors to renal salt-retention and plasma expansion.[10,11] Others have suggested that abnormal cellular handling of calcium or magnesium may lead to excessive vascular hyperreactivity.[12]

The increased propensity of the black population with primary hypertension to develop end-stage renal disease was demonstrated in a five-year retrospective analysis of all patients who initiated hemodialysis between 1978 and 1982 in the University of Maryland maintenance dialysis program.[13] On the basis of either renal biopsy evidence or clinical grounds 49.2 percent of blacks compared to 18.3 percent of whites were believed to have terminal hypertensive arteriolonephrosclerosis. Additionally, the average age at onset of renal failure was 5.8 years earlier in blacks. These data suggest that blacks appear to develop end-stage kidney disease at an earlier age and with greater frequency than nonblack hypertensives. Notably, 36.6 percent of all patients (black and white) initiating hemodialysis over the five-year period studied had a hypertensive cause for end-stage kidney disease, a largely preventable cause of renal failure. Secondary hypertension undoubtedly contributed to the accelerated renal dysfunction occurring in a sizable percentage of those with other primary intrinsic renal diseases. The economic impact and lost productivity resulting from hypertension-induced end-stage kidney disease, especially in the younger black population, focuses attention on the magnitude of the problem.

## Understanding the Pathophysiologic Process

Better understanding of the pathophysiologic process involved in renal damage has permitted more physiologic approaches to treatment and reduction of renal target organ damage. A major contribution has been through the recent work of Brenner and his colleagues who have shown that the hyperperfusion and hyperfiltration occurring at the level of the glomerulus can cause progressive destruction of renal tissue.[7] These investigators also have demonstrated in animal models that reduction of intraglomerular pressure tends to protect against subsequent glomerular structural injury and proteinuria. This failure of renal autoregulation of vascular tone in systemic hypertension permits the transmission of higher systemic pressures to the glomerular capillary network. Current thought is that this may be an important mechanism underlying the progressive nature of both nephrosclerosis and other intrinsic renal diseases. Although many antihypertensive medications may successfully reduce systemic blood pressure, not all effectively reduce the associated glomerular hypertension and thus may not spare the progressive destruction of renal mass.

## Different Pharmacologic Approaches

Traditional therapy in patients with hypertension as well as in patients with renal disease has, until recently, focused on the stepped-care approach with salt restriction and diuretic therapy as standard first modalities. This approach may be effective in reducing systemic blood pressure in a sizable proportion of patients; however the renal-sparing benefit of these modalities remains to be established. Unphysiologic reduction of blood pressure with diuretics, salt restriction, or vasodilators can stimulate the renin-angiotensin system both at a peripheral and an intrarenal level, raising concern about potentially deleterious effects on intrarenal hemodynamics.

Animal models of hypertension clearly demonstrate that the observed glomerular hypertension is directly related to vasoconstriction of the efferent arteriole produced by angiotensin II.[7] Antihypertensive agents that stimulate the renin-angiotensin system thus may accelerate renal damage while controlling systemic pressure by increasing intraglomerular pressures. Angiotensin II affects the kidney in other ways, including both increased salt retention and transglomerular passage of albumin, each of which may accelerate the nephrosclerotic process.[14] Thus, antihypertensive agents that have the ability to interrupt the renin-angiotensin system at both peripheral and renal vascular levels may have the potential to physiologically reduce peripheral blood pressures, yet reduce intraglomerular pressures and maintain renal perfusion while protecting the kidney from glomerular capillary hypertension and progressive nephrosclerosis. In addition, prudent use of antihypertensive agents tailored for the patient's specific hemodynamic physiology can avoid unnecessary renin-angiotensin activation with its effects at the level of the vascular tree and the kidney.

Angiotensin-converting enzyme inhibitors and calcium entry blockers appear to be agents that may best preserve renal function because of their abilities to concomitantly reduce systemic blood pressure while maintaining the glomerular filtration rate and renal blood flow and reducing renal vascular resistance. Experimentally both classes of drugs have been demonstrated to protect the kidney from the damaging effects of intraglomerular hypertension.[7,15,16] Angiotensin-converting enzyme inhibitors achieve this by interrupting the production of angiotensin II at a systemic and glomerular level. The calcium entry blockers protect the vasculature through their ability to reduce cytosolic calcium concentration in vascular smooth muscle, which antagonizes the vasoconstricting effects of both

angiotensin II and norepinephrine.

### Current and Further Options

Rational approaches to antihypertensive therapy must take into consideration both pressure-dependent and pressure-independent mechanisms. Traditional antihypertensive care has not demonstrated adequate success in preventing renal disease, especially in the black population. Thus, therapy should be directed not only to lowering systemic pressure but also to lowering pressure at localized vascular beds, especially at the level of the kidney. In the future, the ability to protect the vascular tree and the renal vascular system from the trophic and mitogenic effects of angiotensin II and norepinephrine may prove to be a major focus of antihypertensive care. Many of these options are available at present; some are within grasp in the near future.

Treatment of hypertension should be based on the hemodynamic pathophysiology specific to the individual patient. Major areas of future research must concentrate on developing noninvasive and inexpensive methods for characterizing the pathophysiologic patterns in individual patients. We hope a more physiologic approach to the control of blood pressure based on these principles not only will result in more successful pharmacotherapy at the systemic and end-organ level but also will result in reduced side effects and an improved quality of life.

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# Risk Factors for Stroke Subtypes

*CATHERINE M. SHARKNESS MD, THOMAS R. PRICE MD, and ROGER SHERWIN MB, BChir*

**Stroke is the third leading cause of death in the United States and a leading cause of disability. Epidemiologic study of stroke has been limited because of multiple types of stroke with different causes, but now that stroke subtypes are more easily differentiated, risk-factor profiles for subtypes can be identified. This information is important clinically because prevention of stroke should focus on modifiable risk factors.**

Stroke is defined as a sudden, nonconvulsive, focal neurologic deficit persisting beyond 24 hours (though in certain cases deficits are global). This definition excludes cases of transient ischemic attack (TIA). Currently stroke is the third leading cause of death in the United States and a leading cause of disability. In 1985, the crude death rate for stroke was 65.3 per 100,000.[1]

The epidemiologic study of stroke has been limited due to the heterogeneity within the diagnostic category. In the past, stroke had been divided broadly into two groups: ischemic and hemorrhagic. With the availability of newer diagnostic methods, subtypes of strokes now can be identified with a relatively high degree of accuracy. For practical purposes, stroke may be classified into six subtypes. Ischemic stroke includes four main categories: atherosclerotic, embolic, lacunar, and infarction, etiology unknown. Similarly, hemorrhagic stroke includes two categories: intracerebral hemorrhage (ICH) and subarachnoid hemorrhage (SAH).[2] Although certain other rare forms of stroke occur in which the mechanism is understood (for example, secondary to infection), these will not be further discussed.

## Major Risk Factors for Ischemic Stroke

Much of the information on the subject of risk factors was derived before current definitions of subtypes were in use. Risk factors for ischemic stroke have been the most extensively studied. The major risk factors are hypertension, increasing age, male gender, family history, black race, diabetes mellitus, previous stroke, transient ischemic attack and cardiac disease (Table 1).[3]

**Hypertension** Hypertension is the dominant risk factor for ischemic stroke. Stroke risk increases proportionately with increasing blood pressure, without a threshold level.[4] In Framingham, for each 10 mm Hg increase, ischemic infarction incidence increased 30 percent.[5]

**Age and Gender** Stroke incidence increases with age and more than doubles for each successive decade over age 50.[3] The age-specific incidence of stroke is higher in men than in women, with a male to female relative risk of 1.1 to 2.5.[6]

**Family History** Evidence suggests a familial predisposition to stroke that is genetic and may relate to one's susceptibility to hypertension.[3] In a recently published prospective study of Swedish men, maternal (but not paternal) death from stroke was found to be an independent risk factor for stroke in the men studied.[7]

**Race** Stroke incidence and mortality rates are higher in blacks than in whites, with relative risks of stroke death of 1.5 to 1.9 for blacks compared to whites.[8] Some of this difference in risk is attributable to the greater incidence of hypertension in blacks, but there appears to be a greater risk of stroke in blacks at a given level of blood pressure.[9]

**Diabetes Mellitus** Diabetes mellitus independently contributes to stroke risk, with a relative risk of 2.0 to 4.0 reported in both retrospective and prospective studies.[10–12]

**Previous stroke** The risk of recurrent stroke is many times that of a first stroke.[3] A transient ischemic attack (TIA) increases stroke risk tenfold,[4] and about 10 percent of all strokes are preceded by TIA.[3] Racially,

**Table 1. Major Ischemic Stroke Risk Factors**

| |
|---|
| Hypertension |
| Increasing age |
| Black race |
| Male gender |
| Family history |
| Previous stroke |
| Transient ischemic attack |
| Diabetes mellitus |
| Peripheral vascular disease |
| Cardiac disease (myocardial infarction, angina, valvular, arrythmia, especially atrial fibrillation) |

**Other Ischemic Stroke Risk Factors**

| |
|---|
| Hypercholesterolemia |
| Increased lipoprotein Lp (a) level |
| Reduced HDL level |
| Cigarette smoking |
| Alcohol use |
| Obesity |

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more whites than blacks have TIA.[13]

**Cardiac Disease** Independent of blood pressure, individuals with cardiac disease (even if not symptomatic) have more than twice the risk of stroke than persons with normal cardiac function. Relevant cardiac disease includes coronary heart disease, congestive heart failure, left ventricular hypertrophy by ECG, and cardiac arrythmias, especially atrial fibrillation. For example, atrial fibrillation increased the risk of stroke fivefold in the Framingham study.[3]

**Multiple Risk Factors** The role of multiple risk factors in the genesis of ischemic stroke is striking. Several stroke risk factors have a synergistic effect. For example, in the Framingham cohort, members had a six times increased risk of stroke if they had both HBP and diabetes and a 9.4 times increased risk with both HBP and hypercholesterolemia. Paffenberger and Wing reported a 12.5 times elevated risk for nonfatal stroke when HBP was combined with coronary heart disease, diabetes mellitus, and a parental history of HBP.[5]

## Other Risk Factors for Ischemic Stroke

Other ischemic stroke risk factors include lipoprotein abnormalities, cigarette smoking, alcohol consumption, and obesity (Table 1).

**Lipoprotein Abnormalities** The association of serum cholesterol and stroke varies among studies. Some report a statistically significant association between elevated serum cholesterol level and stroke[14,15] while others, including the Honolulu Heart Study, do not.[16–18] In the Framingham study this association was seen only in men under 55.[5]

Evaluation of lipid subfractions is more revealing than simply looking at total cholesterol levels. Both reduced HDL-cholesterol levels and elevated lipoprotein Lp (a) levels have been associated with an increased risk of stroke in several case-control studies.[19–22] Finally, evidence of racial differences in lipid subfractions may help to explain some of the difference in risk-factor profiles between blacks and whites.[23–26]

**Cigarette Smoking** The association of cigarette smoking and stroke varies among studies. Some studies show no significant independent association between the two,[14,17,27] while in others a two- to fourfold increased risk of stroke among smokers is reported.[28–30] In the recently reported Framingham 26-year follow-up, smoking is independently associated with an increased risk of stroke in both men and women, especially in current smokers. After adjustment for other factors, the relative risks for brain infarction were 1.56 for men and 1.86 for women.[31] Finally, in the prospective Honolulu Heart Study, current smokers have twice as great a risk of stroke as past smokers.[30]

**Alcohol** The role of alcohol in stroke is not definite. Some studies, including Framingham, failed to find a significant independent association between alcohol use and stroke[27,32–34] while others reported such an association for both regular drinking and alcohol intoxication.[14,35,36]

**Obesity** Obesity as a risk factor for stroke is not consistent. Not all studies report an increased stroke risk in the obese, and in Framingham no independent association between obesity and stroke risk was found after adjustment.[5] In the studies reporting an increased frequency of stroke in the obese, the relative risk is modest.[5,14,27,37] For example, it was 1.84 in one study.[27]

**Oral Contraceptives** The association of oral contraceptives and stroke is controversial. Case-control studies and cohort studies report relative risks of large magnitude, ranging from 6 to 26 for case-control studies and 3.2 to 5.0 for cohort studies.[38] However, a number of reviews suggest that the evidence for an association of oral contraceptives with stroke is inconclusive.[3,39] After controlling for smoking, one author found no independent effect of oral contraceptive use on stroke risk, except for subarachnoid hemorrhage.[32] Finally, the summary statement of risk factors for stroke by the Stroke Council did not reach consensus on this issue.[3] It is possible that decreased amounts of estrogen in currently available preparations have led to a decline in risk.

## Embolic Stroke Risk Factors

Risk factors for embolic stroke are thought to be those associated with ischemic stroke. Additionally, the presence of a prosthetic heart valve, prolapsed mitral valve, and endocarditis are associated with an increased risk of this type of stroke.[40] With the use of subtyping, the risk-factor profile for this type of stroke may be delineated more clearly.

## Lacunar Stroke Risk Factors

Risk factors for lacunar stroke also are thought to be those associated with ischemic stroke. Lacunar stroke results from occlusion of penetrating arteries in the deeper, subcortical parts of the cerebrum and brain stem. Small cavities or lacunae remain after infarction of brain tissue and subsequent cavitation. Hypertension is the major risk factor known to be associated with lacunar stroke, affecting arteries 200 to 400 microns in diameter pathologically with lipohyalinosis and larger arteries 400 to 900 microns in diameter with atherosclerotic plaques. Additionally, lacunar infarcts can be caused by penetrating arteries that become obstructed due to atherosclerosis of the parent artery. Finally,

emboli from the heart or carotid system are a less common cause of lacunar stroke.[41] Specific studies of this type of stroke may better delineate its risk factor profile.

### Intracerebral Hemorrhage Risk Factors

The major risk factors associated with intracerebral hemorrhage (ICH) are increasing age, HBP, black race, and prolongation of coagulation parameters with warfarin use. Other risk factors are chronic alcohol use and use of sympathomimetics and other drugs (Table 2).[42]

**Age and Hypertension** ICH incidence increases with age.[16,43] Hypertension is the most important risk factor according to some authors[29,42] but Brott *et al.* found prior cerebral infarction with anticoagulant use to be the most important.[44] Among all stroke types, mean diastolic BP was highest in intracerebral hemorrhage.[16]

**Race** Race is a risk factor for ICH, but may not increase risk independently of hypertension. In one study, the incidence of ICH in blacks was over twice that of whites with a rate of 32/100,000 for blacks compared to 12/100,000 for whites.[45]

**Oral Anticoagulants** Use of oral anticoagulants is estimated to increase the risk of ICH between eight- and elevenfold. The risk of ICH is associated with excessive prolongation of the prothrombin time, although there is not a consensus as to what is considered excessive. Kase suggests that a prothrombin time in the range of 1.5 times control is safer.[46]

**Alcohol** Alcohol use has been found to be a risk factor for hemorrhagic stroke in two prospective studies, with a relative risk of 3.0.[43,47]

**Sympathomimetics and Other Drugs** Of the amphetamines, methamphetamine-associated ICH is most common (especially with intravenous use). Less commonly, amphetamine and pseudoephedrine have been associated with ICH. ICH generally occurs shortly after use of the drug (within minutes to hours) in chronic users, perhaps due to a drug-induced angiopathy. Occasionally ICH occurs after first-time use. The use of sympathomimetics may account for the occurrence of ICH in which the cases are not associated with elevated blood pressure (by traditional criteria). Finally, use of cocaine and the street-drug Talwin-pyribenzamine ("Ts and blues") have occasionally been associated with ICH occurrence.[46]

In case reports, phenylpropanolamine (a structural analog of amphetamine), contained in over-the-counter appetite suppressants and decongestants, has been associated with ICH in previously healthy persons without a history of hypertension or elevated blood pressure on admission.[48]

### Subarachnoid Hemorrhage Risk Factors

Major risk factors for subarachnoid hemorrhage (SAH) include increasing age, female sex, hypertension, smoking, oral contraceptive use. Another risk factor for SAH is use of alcohol, both chronic use and acute alcohol intoxication (Table 3).

**Age and Sex** The incidence of SAH increases with age, but this type of stroke tends to occur at a younger age than the other types of stroke. The majority of cases of SAH occur before age 65. Unlike the other stroke subtypes, SAH is more common in women.[49]

**Hypertension** Hypertension is the most important risk factor for SAH, best shown in the Framingham Study, Honolulu Heart Study, and the Hisayama Study in Japan.[49] Oral contraceptive use increases the risk of SAH, with a relative risk of 6.5 reported in one study.[32]

**Cigarette Smoking** Cigarette smoking has been shown to be an independent risk factor for SAH. In an oral contraceptive study, the relative risk of SAH among smokers was 5.7.[32] Several studies have also shown an association of smoking with SAH in both sexes, and in Framingham the effect of smoking seemed greater in men than in women.[49,50]

**Alcohol** Alcohol's contribution to SAH is unclear.

**Table 2. Major Intracerebral Hemorrhage Risk Factors**

| |
|---|
| Increasing age |
| Black race |
| Prolongation of protime (Warfarin, coagulopathy) |
| **Other Intracerebral Hemorrhage Risk Factors** |
| Alcohol use: chronic use and acute intoxication |
| Use of amphetamines, cocaine, and Talwin-benzamine |
| Phenylpropanolamine use (rarely) |

**Table 3. Major Subarachnoid Hemorrhage Risk Factors**

| |
|---|
| Increasing age |
| Female sex |
| Hypertension |
| Smoking |
| Oral contraceptive use |
| **Other Subarachnoid Hemorrhage Risk Factors** |
| Alcohol use: chronic use and acute intoxication |

Most of the recent evidence for this association has come from case-control studies in Finland, which report an increased risk of SAH with acute alcohol intoxication in the young.[49] In the Framingham study, alcohol consumption was not associated with an increased risk of SAH.[51] Thus, the role of alcohol, either acute intoxication or chronic use, in the genesis of SAH is not clear.

### Prevention of Stroke: Clinical Application

Risk factors differ between the subtypes of stroke. Some of these risk factors are treatable (for example, hypertension and cardiac disease), while others are not (age, gender, race). For the clinician, it is important to focus on the **treatable** risk factors. With that in mind, the following evaluation scheme is suggested.

Risk factors for stroke can be determined from a good history and physical examination. The following information should be elicited: family history of HBP, stroke, diabetes mellitus, or hypercholesterolemia; personal history of heart disease (myocardial infarction, angina, arrythmia, valvulvar disease), peripheral vascular disease, hypertension, diabetes mellitus, hypercholesterolemia, TIA, previous stroke; smoking, and alcohol use. Finally, obtain a drug history of prescription, nonprescription, and illicit drugs. Specifically, ask about use of oral contraceptives, warfarin, sympathomimetics (including amphetamines), and cocaine.

A comprehensive physical exam with attention to the cardiovascular and neurologic system should be performed. The physician should measure blood pressure in all patients. Evaluation for carotid bruits, assessment of peripheral pulses, and careful auscultation of the heart for murmurs and arrythmias are necessary.

Finally, total and HDL cholesterol and fasting blood sugar should be measured.

Once historical information, physical examination, or laboratory investigation identifies **modifiable** risk factors, intervention on these risk factors can help reduce the risk of stroke. Remember, several of the risk factors act synergistically (HBP and diabetes; HBP and hypercholesterolemia) so attention to multiple risk factors is important. Prevention of stroke should be the physician's focus. As more is learned about risk factor profiles for stroke subtypes, preventive measures can be delineated.

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# YOCON®
## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

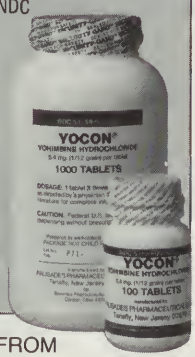
**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.




**References:**


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# CARAFATE®
## (sucralfate) Tablets

**BRIEF SUMMARY**

**CONTRAINDICATIONS**
There are no known contraindications to the use of sucralfate.

**PRECAUTIONS**
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

**Drug Interactions:** Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

**Pregnancy:** Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS**
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

**OVERDOSAGE**
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

**DOSAGE AND ADMINISTRATION**
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

**HOW SUPPLIED**
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

**References:**


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# Ulcer therapy that won't yield, even to smoking



What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine[1] and ranitidine[2] have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.[3,4] A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine[5]:

**Ulcer healing rates:**
(at four weeks of therapy)[5]

| | |
|---|---|
| **Sucralfate:** | |
| All patients | 79.4% |
| Smokers | 81.6%* |
| **Cimetidine:** | |
| All patients | 76.3% |
| Smokers | 62.5% |

*Significantly greater than cimetidine smoker group ($P<.05$).

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like

CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

0825A8





Soldier being examined for effects of high-altitude cerebral edema.

## ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

**EDUCATION** Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

**RESIDENCY** General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

**CONTINUING EDUCATION** Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

**OUTSTANDING ACHIEVEMENTS** Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

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## The benefit of antianginal protection plus safety...




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diltiazem HCl/Marion

- **A remarkable safety profile**[1-6]
  *The low incidence of side effects with Cardizem allows patients to feel better.*
- **Protection against angina attacks**[1,5,7-9]
  *The predictable efficacy of Cardizem in stable exertional* and vasospastic angina allows patients to do more.*
- **A decrease in myocardial oxygen demand**
  *Resulting from a lowered heart rate-blood pressure product.*[5]
- **Compatible with other antianginals**[6]†
- **Safe in angina with coexisting hypertension, COPD, asthma, or PVD**[1,3,5,6]

60 mg 90/120 mg GREATER DOSAGE FLEXIBILITY

*CARDIZEM® (diltiazem HCl) is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

†See Warnings and Precautions.

*Please see brief summary of prescribing information on the next page.*

0778A8



# CARDIZEM® ANTIANGINAL PROTECTION PLUS SAFETY

## diltiazem HCl/Marion

### Usual maintenance dosage range: 180-360 mg/day

**BRIEF SUMMARY**
Professional Use Information

**CARDIZEM®**
(diltiazem HCl)
30 mg, 60 mg, 90 mg, and 120 mg Tablets

**CONTRAINDICATIONS**

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), and (4) patients who have demonstrated hypersensitivity to the drug.

**WARNINGS**

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

**PRECAUTIONS**

**General.** CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

**Drug Interaction.** Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.)

Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment, may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

**Beta-blockers:** Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities.

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

**Cimetidine:** A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a one-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.

**Digitalis:** Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)

**Carcinogenesis, Mutagenesis, Impairment of Fertility.** A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

**Pregnancy.** Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/ postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers.** Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

**Pediatric Use.** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS**

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

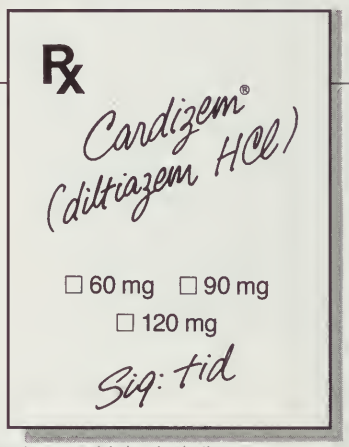
The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

| | |
|---|---|
| Cardiovascular: | Angina, arrhythmia, AV block (first degree), AV block (second or third degree—see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope. |
| Nervous System: | Amnesia, depression, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor. |
| Gastrointestinal: | Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase. |
| Dermatologic: | Petechiae, pruritus, photosensitivity, urticaria. |
| Other: | Amblyopia, CPK elevation, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties. |

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

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# The Maryland Stroke Data Bank

*THOMAS R. PRICE MD and CAROL LEWIS ScD*

**The University of Maryland is one of several medical institutions that have collaborated in establishing a Stroke Data Bank to meet a number of objectives, including obtaining new information about clinical course, factors that predict outcome after stroke, and the distribution by type of stroke.**

In late 1978, The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), four medical institutions, and a data center set out to design and implement a Stroke Data Bank.[1,2] The four institutions in the original pilot study were Boston University, Duke University, the University of Maryland, and the University of South Alabama. The data center was at Stanford University. Investigators agreed on items to be collected and collection procedures. A manual of operations was written, and forms were designed and printed. Between January 1980 and August 1981, we collected data on 1,158 patients at the four centers (938 patients had cerebral infarction or hemorrhage, and 220 patients had transient ischemic attacks).

The objectives of the Stroke Data Bank were to obtain information on the clinical course and outcome after stroke, to identify factors that predicted outcome after stroke, and to develop information that could lead to a standardized diagnostic evaluation. The development of data and systems was also intended for use in planning future clinical trials on the treatment of stroke.

Following the pilot phase, a main phase was begun. The four institutions participating as clinical centers were Boston University, Michael Reese Hospital, New York Neurological Institute of Columbia University, and the University of Maryland. NINCDS acted as a repository during the data entry period. During the main phase of the study (from July 1983 until July 1986) we collected data on 1,805 patients with stroke.

At the University of Maryland, as at the other clinical centers, a team of nurses and physicians collected data. We identified stroke patients soon after admission or diagnosis, collected medical history information, examined each patient, and recorded the results. We followed each patient daily and performed a second, more extensive, examination at 7 to 10 days after the stroke. The team continued to follow patients for worsening or complications for 21 days, unless the patient was discharged or died before this time. All patients admitted to the University of Maryland who were eligible for the study during the 36 months of the main study were entered. At 30 days after the onset of the stroke, we contacted the patient or relatives to learn if the patient was alive. Follow-up visits were made at 3 months, 6 months, 1 year, 2 years, and 3 years after the stroke. When patients were unable to come for a visit, they were contacted by telephone for follow-up information. During the pilot and the main phase, we collected data on 700 stroke patients at the University of Maryland.

Patients were classified as to type of stroke by criteria published in the journal *Stroke*.[2] Briefly described, these include:

1. The diagnosis of **subarachnoid hemorrhage** was made when blood was found in the subarachnoid space by CT scan or by lumbar puncture with a normal CT scan. Most patients had demonstrated aneurysms as the source of the bleed.

2. **Parenchymatous hemorrhage**, diagnosed on finding evidence of blood (high density) in the substance of the brain by CT scan.

3. **Lacunar infarction** usually diagnosed when (*a*) the CT showed no blood but a small deep site of infarction (low density) that by its location could have caused the findings on examination or (*b*) when the patient had a CT showing no lesion and had one of the recognized lacunar clinical syndromes (pure motor hemiparesis, pure sensory stroke, ataxic hemiparesis or dysarthria, clumsy hand syndrome).

4. **Embolic infarction** attributed to cardiac or transcardiac source. This diagnosis was used when the patient had (*a*) a condition that frequently leads to embolism (atrial fibrillation or flutter, endocarditis, myocardial infarction within the previous 6 weeks, atrial myxoma, mitral annulus calcification, mitral valve prolapse, and right to left cardiac shunt) and (*b*) a normal CT or hemorrhagic infarction or a cortical (surface) infarction.

5. **Atherosclerosis** diagnosed when an angiogram (*a*) showed stenosis greater than 75 percent or occlusion of an internal carotid or (*b*) stenosis greater than 50 percent or occlusion of the stem of a major cerebral artery or (*c*) large area of infarction by CT with ipsilateral bruit or prior TIA.

6. **Infarct cause unknown**, diagnosed when none of the above conditions was met or when several possibilities presented themselves.

7. A few patients had strokes of other known cause and were classified as "other."

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## Results

During the pilot phase of the study (1980–1981), the University of Maryland entered 240 patients and during the main phase (1983–1986) 460 patients. The median age for stroke patients admitted to our hospital during the main phase was 61 years. Sixty-one percent were black and 45 percent were male. The distribution of the various types of stroke is listed by percentage in the Table. Infarct unknown cause was the most common type. Atherosclerotic stroke, as defined above, is not very common at either the University of Maryland or the whole Stroke Data Bank.

In the total Stroke Data Bank population, the most common preexisting medical condition in patients was hypertension. By diagnostic type, the rate of hypertension varied from 38 percent in subarachnoid hemorrhage to 76 percent for lacunar infarction. The largest percentage of untreated hypertensive patients occurred in the lacunar infarction groups (40 percent) and the intracerebral hemorrhage group (48 percent). A history of diabetes was common in infarcts (27 to 29 percent had it), although only 17 percent of embolic strokes had diabetes.

Because we were charged with entering all eligible patients into the study, at the University of Maryland we had to include some patients who were chemically dependent, some who were homeless, and a few who were both dependent and homeless. Tracking these patients was a challenge ably met by the entire data bank staff. Through the combined efforts of the staff, we were able to complete one year follow-ups on 95 percent of the patients, 70 percent done in person at the clinic, at the nursing home, or in the home. At the end of the study, we were able to verify vital status (alive or dead) for all 460 patients entered in the main phase. We continue to follow these patients to collect information on long-term outcome.

Other results of studies in the Stroke Data Bank[3,4] on the reliability of information obtained by history and examination, CT scan information, and the reliability of diagnosis in stroke have been published. We also studied and reported the reliability of the CES-D test for identifying patients with depression of mood after a stroke[5] and the reliability of the Barthel Activities of Daily Living Scale.[6,7]

Several projects are now in the data analysis phase; these include predictors of survival at 30 days for intracerebral hemorrhage and ischemic infarction and a predictor of further worsening of deficit for ischemic infarction patients. We expect to publish further information about lesion location in depression of mood following stroke.

The Stroke Data Bank during the last 10 years has been and continues to be an excellent resource for other studies at the University of Maryland. These include ongoing Aphasia Recovery in Stroke Patients Study, under the direction of Rita Berndt PhD, and the Computer Assisted Medical Decision Making in Stroke Study, directed by James Reggia MD, PhD. The Stroke Data Bank has been especially valuable in the long-term studies of depression of mood in stroke patients in collaboration with Robert G. Robinson MD of the Departments of Psychiatry at the Johns Hopkins and the University of Maryland Schools of Medicine.

**Table. Type of Stroke in the Stroke Data Bank**

| | University of Maryland (percent) | Entire Stroke Data Bank (percent) |
|---|---|---|
| Subarachnoid hemorrhage | 21 | 13 |
| Intracerebral hemorrhage | 19 | 13 |
| Lacunar infarction | 7 | 19 |
| Embolic infarction | 13 | 14 |
| Atherosclerotic infarction | 2 | 6 |
| Infarct cause unknown | 34 | 32 |
| Other | 4 | 3 |
| Total | 100 | 100 |

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# Alcohol and Hypertension

*RICHARD D. MOORE MD*

**Over the past two decades, accumulating evidence indicates there is an independent dose-response association between alcohol consumption and blood pressure. Systolic blood pressure is elevated as much as 10 mm Hg and diastolic pressure as much as 6 mm Hg by heavy use of alcohol. This effect appears to be most pronounced in men, with as much as 10 percent hypertension attributable to alcohol consumption.**

An association between excessive alcohol consumption and hypertension was first reported in 1915 by Lian.[1] He found an increased prevalence of hypertension in French servicemen whose alcohol consumption exceeded 2.5 liters of wine per day. During the next 50 years, there were sporadic studies reporting of elevated blood pressures associated with alcohol intoxication and alcohol dependence. These studies, however, did not have control groups and commonly were based on review of hospital records.

Since the mid-1960s, a number of epidemiologic studies in community, industrial, and clinical populations have offered growing evidence of an association between alcohol use and hypertension. Many of these studies have examined the specific correlation between alcohol consumption and blood pressure level while others have examined the prevalence of hypertension associated with alcohol use.

The earliest study examining the association between alcohol consumption and blood pressure level was published by Clark in 1967 using data from 865 men enrolled in the Los Angeles Heart Study.[2] Men who drank three or more alcoholic beverages on average per week had systolic blood pressures that were 1.9 mm Hg higher than those who drank less than this amount. Other cross-sectional studies have demonstrated a dose-response relationship between alcohol consumption and blood pressure. For example, Pincherle and co-workers reported data from more than 12,000 executives who took part in a London health-screening program.[3] Adjusted for age and relative weight, there was a linear dose-response association between alcohol consumption and blood pressure. Heavy drinkers (six or more drinks per day) had mean systolic blood pressures 4.3 mm Hg higher than light drinkers (two or less drinks per day) and diastolic pressures 3.2 mm Hg higher than light drinkers.

## More Recent Studies

Cooke studied the association between alcohol consumption and blood pressure in 13,500 men and 7,400 women who represented a wide cross-section of the inner-Sydney working population.[4] Adjusting for age, adiposity, and smoking, there was a high degree of linear correlation between alcohol consumption and both diastolic and systolic blood pressure. For each 100 grams (approximately 3 to 4 beverages) per week increase in alcohol consumption, mean blood pressure increased by .92 mm Hg in men and 1.5 mm Hg in women. No threshold for this effect was evident.

Other studies have suggested the association between alcohol consumption and blood pressure may be nonlinear. For example, Klatsky *et al.* examined data from 84,000 men and women who were members of a prepaid health plan and found that those who consumed three or more drinks per day had higher systolic pressures (10.9 mm Hg in men and 5.4 mm Hg in women) and higher diastolic pressures (4.5 mm Hg in men and 2.1 mm Hg in women).[5] The association between alcohol consumption and blood pressure was linear in men with a threshold at two drinks per day, but in women there was a J-shaped association with blood pressures greater in nondrinkers than in those drinking one to two drinks per day. The association of blood pressure to alcohol consumption was independent of age, sex, race, smoking, coffee use, former heavy drinking status, educational attainment, and adiposity.

Criqui *et al.* examined the relationship between alcohol consumption and blood pressure in 2,482 men and 2,301 women, aged 20 and older, who were part of the Lipid Research Clinics Prevalence Study.[6] Men with the highest level of alcohol intake (greater than or equal to five beverages per day) had blood pressures averaging 8 mm Hg higher than those drinking less than that. Women, however, had higher blood pressures either at the greatest level of consumption or with abstaining, leading to a U-shaped relationship. For both men and women, these associations were more pronounced for systolic than for diastolic pressures. Multivariate analysis showed that this relationship was independent of age, obesity, cigarette smoking, regular exercise, education, and gonadal hormone use. The univariate U-shaped alcohol to blood pressure association in women was confounded in part by differences in obesity and cigarette smoking in nondrinking women and by very low alcohol consumption in hypertensive women using medication.

Both linear and curvilinear associations were found in data from the Stanford Five City Project, a representative population sample from four Northern California cities surveyed in 1979 to 1980.[7] Pooled samples included 883 men and 959 women, aged 20–74, who

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were not taking blood pressure medications. In men, age-specific analysis showed an association between alcohol consumption and both systolic and diastolic blood pressures. The association was linear in men aged 20 to 34 and 50 to 74, and J-shaped for men aged 35 to 49. The associations remained significant when adjusting for age, relative weight, income, education, physical activity, cigarette use, and untimed urinary sodium to creatinine ratio. In women, alcohol use was associated significantly with blood pressure only in those above age 49 and was more striking in those not taking estrogens. This association was independent of the same variables as for the men. There was no threshold or plateau effect in men, although in women aged 50 to 74, consumption of greater than two drinks per day was associated with the most significant rise in systolic blood pressure.

Several prevalence studies also have examined the relationship between hypertension and alcohol consumption. Klatsky *et al.* in data from the Kaiser Permanente pre-paid health plan, found a risk ratio for hypertension (BP ≥ 160/95) of 2.4 for white males, 1.8 for white females, 1.5 for black males, and 1.6 for black females comparing heavy drinkers with nondrinkers.[5] Dyer and co-workers found a risk ratio of 1.6 for hypertension (BP ≥ 160/95) comparing problem drinkers with nonproblem drinkers and a risk ratio of 1.8 comparing heavy drinkers (≥ six drinks per day) with nonheavy drinkers in 1,900 Chicago Western Electric employees.[8] Criqui, in his report of the Lipid Research Clinics Prevalence Study, showed that men aged 35 years or greater who consumed more than five beverages per day were 1.5 to 2 times more likely to be hypertensive (BP ≥ 160/95) than were nondrinkers.[6]

The population attributable risk for hypertension due to alcohol consumption also has been calculated. In the 1980 Australian Risk Factor Prevalence Study, 11 percent of hypertension in men and 1 percent in women could be attributed to moderate alcohol consumption.[9] In still another study, the population attributable risk in men was as high as 12 percent for a systolic blood pressure ≥160 mm Hg due to alcohol consumption of four or more drinks per day.[10]

### Prospective Epidemiologic Studies

Several prospective epidemiologic studies have added further support for an association between alcohol consumption and blood pressure. The earliest of these was the Chicago People's Gas Company Study reported by Dyer *et al.* in 1977.[11] Those employees classified as problem drinkers were found to have a greater increase in systolic and diastolic blood pressure over a four-year period than those classified as nonproblem drinkers.

In the Zutphen Study, reported in 1985, the change in alcohol consumption was correlated with the change in blood pressure over a five-year period.[12] Blood pressure increased with increasing alcohol intake and decreased with decreasing alcohol intake. The association was independent of change in body mass.

Finally, it was found in the Albany Heart Study that men who stopped or decreased their alcohol intake had lesser increases in their average blood pressure over an 18-year period.[13] This effect was independent of changes in weight, age, and smoking.

### Measurement of Alcohol Intake

One criticism made of the association between alcohol use and blood pressure is that the measurement of alcohol intake was crude in many of these epidemiologic investigations. Studies are difficult to compare because of differences in questionnaire design, categories of alcohol use, and the definition of problem drinkers. In particular, underreporting of alcohol intake may be common, especially in heavy consumers. This has led to the contention that abstainers may appear to have higher blood pressures than low-dose users because a significant number of heavy consumers with elevated blood pressures are denying their intake. However, this probably does not explain the curvilinear dose-response association since it seems just as likely that heavy consumers would underreport rather than deny their alcohol intake and be classified as low-dose users, thereby causing a proportional elevation in the blood pressures found in the "low-intake" group.

To provide experimental support and to overcome some of these criticisms, clinical trials examining alcohol consumption and blood pressure have been conducted recently. In 1984, Potter and Beevers studied the effect of alcohol on blood pressure in 16 men with hypertension who regularly drank up to 80 grams (approximately 3 beverages) of alcohol daily.[14] Antihypertensive treatment was stopped two weeks before the men were admitted to a hospital. Blood pressures remained high in eight patients who continued their regular alcohol consumption up to the fourth day after admission. In the next four days no alcohol was consumed and blood pressures fell significantly. Systolic pressure fell an average of 15 mm Hg and diastolic an average of 6 mm Hg. Reintroduction of alcohol produced statistically significant increases in both systolic and diastolic pressures to prestudy levels.

In 1985, Puddey and co-workers reported the results of a randomized controlled clinical trial of alcohol consumption and blood pressure.[15] This was a 12-week cross-over study of 48 normotensive men who previously consumed four to five drinks per day. The subjects

drank either three drinks per week or three drinks per day for six weeks. Both systolic and diastolic blood pressures were higher (4 mm Hg and 2 mm Hg respectively) during the high consumption period and fell significantly during the low consumption period.

## Mechanisms

The mechanism for the effect of alcohol on blood pressure is not known. Data on the direct vascular effects of alcohol are equivocal. Recent data indicate that alcohol has both vasoconstrictor and vasodilatory effects depending upon the vascular bed.[16]

The role of catecholamines has been investigated in several studies. Urinary catecholamines appear to increase during acute and chronic alcohol consumption.[17] Ireland and co-workers found that plasma epinephrine levels increased acutely along with blood pressure after alcohol ingestion in normotensive men.[18] In contrast, Arkwright and co-workers were unable to demonstrate elevated plasma catecholemines in chronic alcoholics.[19] In addition, Potter found no significant differences in urine metanephrine concentrations after withdrawing alcohol in chronic alcoholics.[14]

An effect of alcohol on the renin-angiotensin system has also been postulated. Linkola examined plasma renin activity, aldosterone, and cortisol in young healthy men who were on a constant sodium and potassium diet. Plasma aldosterone initially declined during ethanol loading, but during the subsequent three hours when ethanol levels were declining, plasma aldosterone rose about twofold.[20] No changes in plasma renin activity or plasma cortisol occurred during the first three hours. Plasma renin activity did not become elevated until the hangover phase, some 14 to 16 hours later.

In another study, plasma renin concentration was found to be increased twofold in chronic heavy drinkers, although this elevation did not correlate with blood pressure.[21] Beevers and co-workers reported elevated plasma renin activity in 28 of 48 chronic alcoholics and raised plasma renin aldosterone in 7 of 48.[22] All values returned to normal by the seventh day after alcohol withdrawal. In contrast, Arkwright found no difference in renin activity, angiotensin II, aldosterone, cortisol, and free and sulfated norepinephrine and epinephrine levels comparing moderate and heavy drinkers to nondrinkers.[19]

The association between alcohol and blood pressure may be related to the temporal sequence of alcohol use and blood pressure measurement. In other words, during the period of alcohol withdrawal, the severity of which is probably related to the extent of prior alcohol intake, there is an excess adrenergic discharge, which increases blood pressure until withdrawal is complete. Many studies require an overnight (or 12-hour) fasting period, during which subclinical alcohol withdrawal may be occurring. Similarly, patients are known to diminish alcohol intake before visiting a clinic or physician. Therefore, blood pressure elevations can be directly related not only to the amount of alcohol consumed but also to the pattern of consumption in the interval between last alcohol use and blood pressure measurement. If the withdrawal hypothesis is at least partially correct, several implications emerge. First, in future studies of alcohol and blood pressure, drinking patterns in the interval between last alcohol use and blood pressure determination should be recorded. Second, the clinician evaluating a potentially hypertensive patient should take a detailed history of patterns of alcohol use, particularly in the 48 hours before the visit, to determine hypertension reversibility and to evaluate the response to therapy.

Finally, it has been suggested that the association of blood pressure and alcohol may not be causal but instead due to various accompaniments in the life-style. Heavy drinkers are more likely to smoke, may weigh more, may be less physically active, and may have a different diet than teetotalers or light drinkers. Compliance with hypertensive medications may vary with alcohol intake as suggested by data from the North Karelia (Finland) Project.[23] However, several studies adjusted for many of these factors and continued to find a significant association between alcohol consumption and blood pressure.

## Alcohol and Stroke

The effect of alcohol consumption on blood pressure may have particular implications for the development of stroke. It is important to review these data as part of an overview of alcohol and blood pressure.

Hillbom and Kaste studied 100 consecutive patients, aged 15 to 55, with acute ischemic brain infarction verified by computed tomography, angiography, or brain scanning.[24] In 40 cases, the onset of symptoms was preceded within 24 hours by alcohol intoxication. Alcohol intoxication preceding brain infarction was 4 to 7 times as common in men and 6 to 15 times as common in women as intoxication in the general Finnish population of the same age and sex. Heavy drinking was twice as common in men and fives times as common in women in these 40 cases as was heavy drinking in the general Finnish population of the same age and sex. The ethanol-induced risk was highest in middle-aged women and young men. These authors also reported on associations between cerebral hemorrhage from ruptured aneurysm and cerebral hemorrhage in

general associated with alcohol intoxication.[25] In 37 of 172 consecutively presenting patients with primary subarachnoid hemorrhage (22 percent), the onset of symptoms was preceded within 24 hours by alcohol intoxication. Alcohol intoxication preceding subarachnoid hemorrhage was 2 to 3 times as common in men and 2 to 13 times as common in women as alcohol intoxication in the general Finnish population.

Kozarevic *et al.* examined the seven-year incidence of stroke mortality in the Yugoslavia Cardiovascular Disease Study. An age-adjusted dose-response relationship was found, with a relative risk of stroke mortality of 2.9 for 4 beverages per week ranging up to 8.9 for 60 or more beverages per week. Multivariate analysis that included age, systolic blood pressure, cholesterol level, and cigarette use resulted in a positive but no longer significant coefficient for alcohol consumption. However, when blood pressure was omitted from the analysis, the association of alcohol consumption to stroke mortality was significant, suggesting that alcohol induced hypertension is an underlying mechanism.[26]

## Conclusions and Recommendations

Consistent epidemiologic evidence indicates that the consumption of three or more alcoholic beverages per day is associated with elevated blood pressures and as much as 10 percent of hypertension. The effect of alcohol in elevating blood pressure appears to be particularly prominent in men. In persons with a heavy alcohol intake, the withdrawal of alcohol or its restriction is likely to result in a decline in blood pressure, at least in the short term. Even in normotensive patients, the restriction of alcohol may prevent or retard the development of hypertension. The risk of stroke also may be lowered by restricting alcohol intake in heavy users, particularly in those under age 55. The effect of alcohol on blood pressure is probably independent of other risk factors for hypertension, but the specific pathophysiologic mechanism is unknown.

Although a number of studies show a linear dose-response relationship between alcohol consumption and blood pressure, frequently with a threshold at two to three drinks per day, several studies suggest that a J- or U-shaped dose-response relationship exists with abstainers having higher blood pressures than those who drink one to two drinks per day. This curvilinear association is found more commonly in women than in men. Whether there is truly a hypertensive effect with low-dose alcohol consumption remains unclear, as other factors related to both blood pressure and patterns of alcohol consumption may be causing this curvilinear association. Until further research sheds light on this effect, it is unwise to consider low-dose consumption as a potential therapy for hypertension.

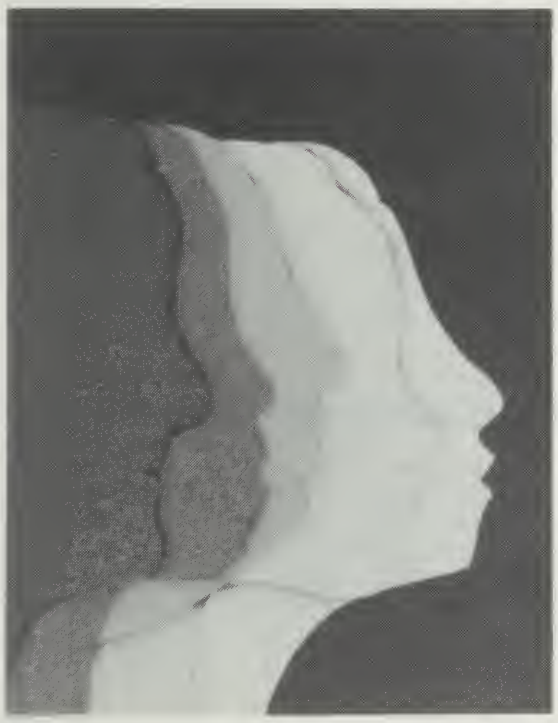
Overall, the data suggest it is important for the physician to obtain a careful drinking history and to encourage hypertensive patients to restrict their alcohol intake to two beverages or less per day. This should improve blood pressure directly, as well as improve compliance with medications and other aspects of lifestyle related to hypertension. It is also important for the physician to identify those patients who no longer have adequate control of their drinking habits. Sometimes this can be done by asking routine questions about the quantity and frequency of alcohol use, but identification often requires a more sensitive alcohol-abuse screening test such as the CAGE or the Michigan Alcoholism Screening Test (MAST).[27] Biochemical markers such as the mean cell volume (MCV) or the gamma-glutamyltransferase (GGT) can also be of assistance in diagnosing alcohol abuse.[28] Uric acid also may be a marker, although weaker than the MCV or GGT.

Although it remains important to conduct studies to determine the long-term effect of reduction in alcohol consumption on blood pressure, at this time it seems prudent for physicians to consider alcohol consumption a risk factor for hypertension that is important to target for intervention.

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# A New National Approach to Lowering Blood Cholesterol

*ROGER SHERWIN MB, BChir and CAROL LEWIS ScD*

**The National Cholesterol Education Program, modeled on the successful National High Blood Pressure Education Program, recently published new national guidelines for detection, evaluation, and treatment of blood cholesterol in adults. Two complementary approaches, one "clinical" and the other "public health," form a coordinated national strategy. The rationale for the primary prevention of cardiovascular heart disease by a public health intervention aimed at shifting the distribution of cholesterol levels in the entire population to a lower range is discussed here.**

The new national guidelines for detection, evaluation and treatment of high blood cholesterol in adults are remarkable in several respects. There is a shift in the concept of "normal," usually based on a population distribution, to the concept of "desirable," based on a coronary heart disease risk curve. Age-specific cut points for desirable blood cholesterol levels have been eliminated, reflecting the realization that physiologically (at least up to menopause), blood cholesterol need not increase with age. And a "clinical" and a "public health" approach now are presented as entirely complementary, representing a coordinated national stragegy. Each of these issues has a precedent in the extensively discussed and periodically revised high blood pressure diagnosis and treatment recommendations endorsed over the past 16 years by the National High Blood Pressure Education Program, the model on which the National Cholesterol Education Program is based.

Now that the validity of the "lipid hypothesis" has been directly established in man, the case for reducing blood cholesterol to avoid or to postpone coronary heart disease (CHD) in those at the upper extreme of the population range of blood cholesterol is overwhelming.[1-3] What is less obvious and has not been directly demonstrated by experiments in man is the desirability of lowering blood cholesterol in the much larger number of individuals in the middle of the range or, especially, in the lower end of the range.

We discuss the *primary* prevention of coronary heart disease by intervening on the population as a whole, as advocated by the new adult treatment guidelines. These endorse an overall public health strategy aimed at shifting the distribution of cholesterol levels in the entire population to a lower range to complement the patient-based approach that seeks to identify and treat individuals at high risk.

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## Estimation of Risk and Impact of Risk Reduction

The best available evidence suggests that the risk of CHD starts to increase beginning at the lowest observed levels of serum cholesterol. The most convincing demonstration of this is provided by the recently published results of the follow-up of 356,222 men, aged 35 to 57, 6 to 8 years after they were screened to assess their eligibility for the Multiple Risk Factor Intervention Trial (MRFIT).[4] The approximately two million person-years of experience provided by these data are an order of magnitude larger than the data of any other comparable study, which implies a correspondingly greater degree of precision in the estimation of risks than had been possible with previous studies. The risks associated with various levels of serum cholesterol are shown in the Table. It is clear that risk increases gradually from the lower end of the distribution; there is no point below which an individual can be said to be free of risk associated with the level of serum cholesterol.

A further consideration that leads us to believe it is desirable to lower the serum cholesterol levels of all members of the population is a consequence of the first. While those above the 80th percentile of the MRFIT population (or >244 mg/dl) are at the highest absolute risk (11 deaths per 1,000 person years), they account for less than two-fifths (38 percent) of all the cases of coronary disease in the population. Identifying, treating, and successfully preventing CHD in these individuals, while desirable, would not solve the problem of the overall burden of CHD in the population. The remaining 80 percent of the MRFIT population account for 62 percent of the cases. Even the 50 percent of individuals below the median (212 mg/dl) still account for 30 percent of the CHD cases. In other words, to obtain the full benefit of this intervention it is necessary to lower the serum cholesterol levels in the entire population.

It is important to distinguish between the impact on the individual and the impact on the population. Those individuals above the 90th percentile of serum cholesterol who are identified by screening and are aggressively treated by diet (and if necessary, drugs) may have

**Table. Serum Cholesterol and Six-year CHD Mortality in Deciles of Men Screened for MRFIT ($n$ = 356,222)**

| Decile of serum cholesterol* (mg/dl) | Number of deaths | Approximate Percentage of deaths | Rate per 1,000** | Relative risk** |
|---|---|---|---|---|
| ≤167 | 95 | 4 | 3.2 | 1.00 |
| 168–181 | 101 | 4 | 3.3 | 1.05 |
| 182–192 | 139 | 6 | 4.2 | 1.31 |
| 193–202 | 149 | 7 | 4.2 | 1.33 |
| 203–212 | 203 | 9 | 5.4 | 1.72 |
| 213–220 | 192 | 9 | 5.8 | 1.84 |
| 221–231 | 261 | 11 | 6.9 | 2.20 |
| 232–244 | 272 | 12 | 7.4 | 2.33 |
| 245–263 | 352 | 16 | 9.1 | 2.88 |
| ≥264 | 494 | 22 | 13.1 | 4.13 |

*Source:* Stamler, J.; Wentworth, D.; Neaton, D. "Is Relative Risk of Premature Death from Coronary Heart Disease Continuous and Graded?" *JAMA* 256(1986):2823–28.
* The deciles divide the population into tenths in order of serum cholesterol levels.
** Age adjusted.

their risk of CHD very substantially reduced, perhaps by an average of 50 percent. On the other hand, those individuals below the 80th percentile who choose to lower their cholesterol by moderate dietary changes may lower the risk by as little as 10 percent, a reduction not particularly impressive to the individual concerned. However, this relatively minor intervention in the large number of individuals at moderate risk would prevent more cases of coronary heart disease than the major intervention in the small number of individuals at high risk.

If successful, the moderate intervention would have greater impact on public health, although the impact on any given individual in terms of risk reduction would be smaller. Although the "public health" approach of intervening on the whole population and the "clinical" approach of screening and intervening on those at highest risk have sometimes been presented as mutually exclusive and competitive, the new guidelines reflect the more recent near-consensus that these two approaches are in fact complementary and compatible and should be pursued simultaneously.

## Analogy between Blood Cholesterol and Blood Pressure

The strategy for reducing morbidity and mortality attributable to blood cholesterol has much in common with the strategy for reducing the morbidity and mortality attributable to blood pressure. As with blood cholesterol, the risk of mortality attributable to blood pressure increases from the lowest values in the population; as a consequence of this, the major part of the mortality occurs below the levels generally recognized as abnormal (≥90 mm Hg diastolic). While there was early consensus on the desirability of treatment for those at the highest levels of blood pressure, only recently has the desirability been recognized of shifting the distribution of blood pressure of the whole population to the left. Although pharmacological treatment is considered an appropriate intervention for individuals at the highest levels of both serum cholesterol and blood pressure, such measures should not be used to shift the population distribution of either blood cholesterol or blood pressure. Instead, interventions on dietary composition and body weight are recommended for the majority of the population. The most important change in diet to achieve lower blood cholesterol is a reduction in saturated fat, and the most important change in diet to achieve a reduction of blood pressure is a reduction of sodium. Reductions in excess body fat obtained by caloric limitation and increased physical activity have a favorable effect on both risk factors.

The analogy between blood cholesterol and blood pressure also applies to the effect of age and the question of whether cut points to define indications for various forms of treatment should be age dependent. The fact that both blood cholesterol and blood pressure tend to increase with age (in the US population) does not imply that these increases are desirable.

The concept that higher levels of blood cholesterol and blood pressure should be accepted without intervention in older people is based on the assumption that the observed increase in these measures is physiological. There are good reasons to believe that under optimal environmental and dietary conditions neither blood cholesterol nor blood pressure increase appreciably during adult life (except for an increase in the blood cho-

lesterol of women after the menopause). Most of the observed increases in blood cholesterol are attributable to increases in body fat and dietary saturated fat and cholesterol that occur with age. Similarly, most of the observed increases in blood pressure are attributable to increases in body fat and dietary sodium that occur with age. After much debate, the definition of cut points as indicators for various forms of treatment for blood pressure were dissociated from age several years ago. The new cholesterol guidelines already have eliminated age-specific cut points for defining undesirable blood cholesterol levels.

It is to be hoped that the unprecedented success achieved by the National High Blood Pressure Education Program over 16 years can be emulated by the National Cholesterol Education Program, which has been modeled on the earlier program designed to reduce the morbidity and mortality attributable to blood pressure in the US population. The NCEP has been able to use much of the scientific base and the experience of the NHBPEP to move quickly to consensus on definitions and treatment issues; it has inaugurated a public awareness and education campaign; and it has provided detection, evaluation, and treatment guidelines to physicians. Like the blood pressure guidelines (now in fourth revision), the cholesterol guidelines will continue to be refined and revised, particularly with regard to new drugs and to children. Meanwhile, the new guidelines offer the physician the most specific available information to assist not only with the treatment of the patient with very high levels of blood cholesterol but also in counseling the many patients who will be seeking advice on reducing the future risk of CHD for themselves and their families.

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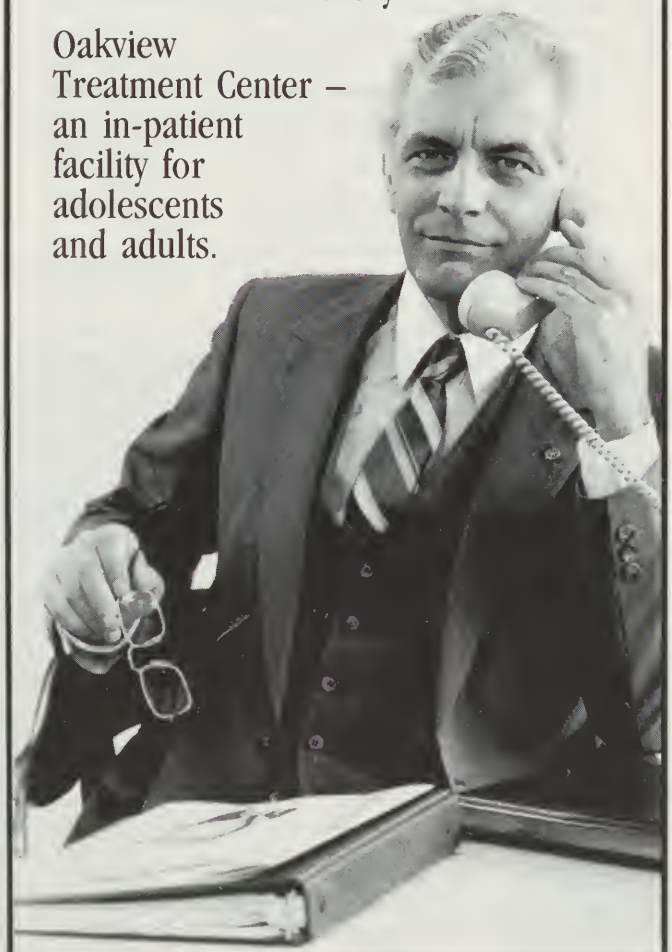
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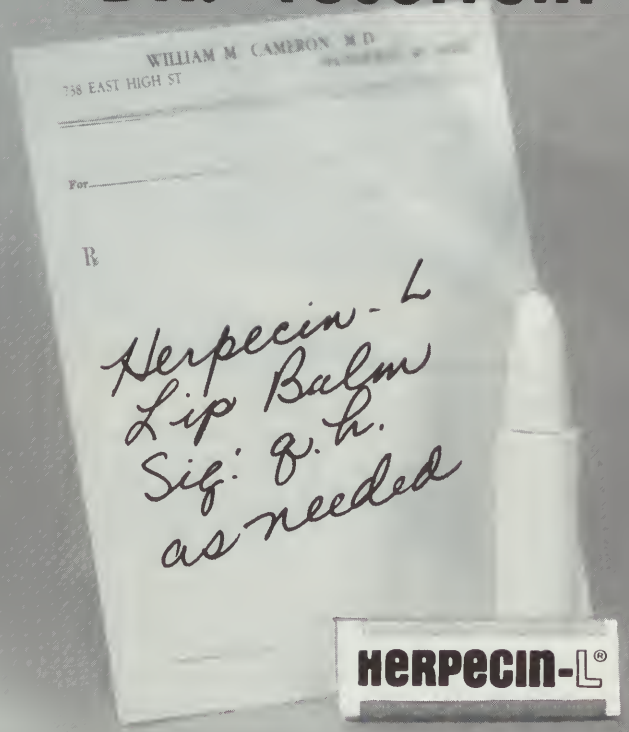
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# Family Oriented Cardiovascular Risk Screening and Intervention

*DAVID A. MEYERSON MD and NANCY C. SANTANELLO MD*

**How to attract high-risk young and middle-aged adults into cardiovascular risk-screening and intervention programs and who in the pediatric population to screen are important and only partially answered questions. We demonstrate that a school-based family oriented program can attract into the health care system a significant number of high-risk adults who otherwise might not have been identified. Screening only those children with a positive family history would have failed to identify almost half the higher-risk children in our study. We urge more widespread recognition among the general medical community of the familial nature of cardiovascular disease and of the possibilities for risk modification of entire family units.**

The linear relationship between cholesterol and coronary artery disease in adults is now clear,[1–3] and substantial indirect evidence links elevated cholesterol levels and future coronary artery disease in children. A study of 560 boys, aged 7 and 8 years, from 16 countries showed that the lowest serum cholesterol occurred in three West African countries where the prevalence of coronary artery disease is very low. The highest levels occurred in boys from several European countries and the United States where the prevalence is the highest.[4] A high correlation also existed between the mean serum cholesterol levels and the availability of animal products per capita, suggesting a link between diet and cholesterol levels.

Evidence shows that atherosclerotic diseases and risk factors cluster among family members.[5] Elevated serum cholesterol levels have been reported to occur more frequently in children whose parents have had a premature myocardial infarction.[6] Lee *et al.* studied children from families in which the father had angiographically diagnosed coronary artery disease before age 50; a higher-risk lipid distribution was found in these children compared to those in the Lipid Research Clinic (LRC) population studies.[7] Studies suggest that risk factors for coronary artery disease in children are predictive of risk factors in the parents and vice versa. In addition to being correlated with their family members' levels, cholesterol measurements in children in the Beaver County experience have shown a good predictive value for their own future adult cholesterol levels.[8] The Bogalusa Heart Study showed a similar trend for LDL-cholesterol levels.[9]

Several studies have demonstrated that the atherosclerotic process begins in childhood. Pathologic studies performed during the Korean and Vietnam wars on young American men demonstrated the presence of premature atherosclerotic plaques in the aorta and coronary vasculature.[10,11] The Bogalusa Heart Study[12] showed that the lipoprotein profile predicted even the earliest stages of grossly visible atherosclerosis in the young. Aortic fatty streaks were strongly related to total and LDL-cholesterol, and were inversely related to the HDL-cholesterol/total cholesterol ratio.

## CARES

The purpose of the Cardiac Risk Evaluation Study (CARES) was to determine the feasibility and effectiveness of a school-based family oriented program for cardiovascular disease risk-factor identification and intervention. Unlike other studies[6,7] that examined only children believed to be at high risk (based on a parental history of coronary artery disease) the present study screened volunteer families considered to be healthy. The study tested the assumption that young and middle-aged adults who otherwise might not have entered the medical system for evaluation could be screened by involving them in the screening process for their children. Advances in techniques to measure total and HDL-cholesterol fractions without venipuncture (recently reported by the authors)[13] now make mass screening of both adults and children more feasible and cost effective. Additionally, the investigators anticipated that by focusing parental concerns about their children's future health the parents would be more willing to change the dietary habits of the entire family.

The objectives of this study were to:

- Motivate parents' participation in screening, education and disease prevention based on a concern for their children's health by offering a family health care experience.
- Identify children and their parents whose elevated risk for future cardiovascular disease previously was unknown.
- Focus cardiovascular disease prevention as a family problem, not an individual problem.
- Offer counseling to the entire family (particularly to the person(s) responsible for food buying and preparation) about decreasing serum cholesterol through die-

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tary modification.

- Motivate parents to restructure family dietary habits to lower cholesterol out of concern for the long-term health of their family.

## Methods

Participants for the Cardiac Risk Evaluation Study were enrolled from volunteer families whose children attend the Beth Tfiloh School in Baltimore. Family members were invited to attend one of eight screening sessions held at the school over a three-week period in December 1986.

At the screening session the parents completed a questionnaire for the family. The questionnaire asked demographic data on both the parents and the children. A family medical, genetic, and life-style history was included to determine whether any family member had been identified previously as having a risk factor for cardiovascular disease. In order to provide complete family historical data, information regarding absentee parents was requested. The parents also were questioned whether they would be willing to modify their present diet if their child was identified as having an elevated cholesterol level. While the parents were completing the questionnaire, the children were entertained and educated with films and cartoons provided by the American Heart Association, Maryland Affiliate Inc.

Each family member had weight, height, and blood pressure measurements taken, the latter following American Heart Association standards.

A blood sample was taken from each child and adult via a sterile lancet finger-stick technique. The total and HDL-cholesterols were analyzed using Kodak Ektachem DT60 autoanalyzers by the method previously described.[13]

Evaluation of the questionnaire and the measured parameters identified a subset of the study population with elevated risk for cardiovascular disease. Guidelines for cholesterol levels in adults and children were adopted from the NIH Consensus Conference on Blood Cholesterol, December 1984. Recommended levels for the HDL/total cholesterol ratio were based on data from the Lipid Research Clinics Study. Elevated risk in adults was represented by total cholesterol greater than 200 mg/dl, and HDL/total cholesterol ratio less than 0.22. Elevated risk in children was represented by total cholesterol greater than 170 mg/dl, and HDL/total cholesterol ratio less than 0.25. Blood pressure guidelines for adults followed those recommended by the Joint National Committee on High Blood Pressure (JNC-III). The abnormal blood pressure levels for children by age group were identified using the Report of the Second Task Force on Blood Pressure Control in Children (1987).

Any family with at least one member identified at increased risk was invited to attend a series of seminars designed to offer methods of changing modifiable risk factors. Participation of the entire family was strongly encouraged. The series covered the magnitude of cardiovascular disease in the United States, the diet-cholesterol-cardiovascular disease connection, a general diet guideline, food label reading, shopping, school lunch and snack alternatives, Kosher diets, benefits of exercise and normalization of blood pressure, and risks of smoking. The presentations included lecture format, slides, practice food label reading, hand-outs, and question-and-answer periods.

General dietary intervention guidelines included recommendations to maintain caloric intake based on growth and activity level of children, while decreasing total fat and saturated fat. The diet prescription conformed to the guidelines of the American Heart Association Phase I diet. Recommendations provided practical ways to decrease total dietary fat to 30 percent of calories and saturated fat to less that 10 percent of calories, to increase complex carbohydrates to 50 to 55 percent of calories, to replace saturated fat with monounsaturates and polyunsaturates, and to limit dietary cholesterol to less than 300 mg per day.

The authors plan to rescreen persons identified as being at increased risk in the near future to determine the effectiveness of the intervention on long-term dietary compliance.

## Preliminary Results

A total of 468 individuals volunteered for the screening program, including 235 adults (107 males, 128 females) and 233 children. An estimated one-third of all eligible children participated, with an approximately equal number of boys and girls.

The overall age range of participating children was from 2 to 20 years. The largest subpopulation of children, 44 percent (103/233), ranged in age from 5 to 9 years. Of the 109 family units screened, 86 percent (94/109) included the male parent. The vast majority (86 percent or 92/107) of participating male adults were between the ages of 30 and 50 years. Similarly, 84 percent (107/128) of the female adults were between 30 and 50 years of age.

A total of 130 questionnaires were completed. In the absence of 16 fathers and a mother, historical information was provided by the participating parent. A positive family history for premature cardiovascular disease was reported in 22 percent of families (29/130). Twenty-nine percent of the mothers and 23 percent of the fathers stated they believed they already were fol-

lowing a low fat diet.

**Fifty-one percent (119/235) of the adults and 50 percent of the children (114/228) demonstrated total cholesterol values above the recommended level.**

The mean total cholesterol level for the adult male participants was 206.1 mg/dl (SD +/− 37.6), while for the female participants the mean was 197.5 mg/dl (SD +/− 34.2). The mean total cholesterol level for children was 169 mg/dl and 182 mg/dl for males and females respectively, as compared to LRC data of 160 mg/dl and 164 mg/dl for males and females respectively. For all children as a group, the mean total cholesterol value was 173.1 (SD +/− 28.2).

When the relationship for total cholesterol between parents and children was analyzed by both age group and sex of the child, the correlation was strongest for fathers to their male children ($R$ range .389 to .511, $p < .001$). A statistically significant correlation was also found between fathers and their female children and for mothers to both female and male children. In general, therefore, children with high cholesterol levels were predictive of parents with high cholesterol levels.

We compared and contrasted the number of hypercholesterolemic children with a high-risk family history with those hypercholesterolemic children whose family history was unremarkable. Only 27 percent of the children would have been tested if the decision to screen was determined by positive family history criteria alone. Since half the children had an elevated total cholesterol level, almost half the higher risk children would, therefore, never have been screened. Conversely, we were *not* able to differentiate children with elevated serum cholesterol from those with normal levels, based only on a positive family history of premature cardiovascular disease.

After initial data analysis was performed, families with higher-risk members were notified and invited to attend our counseling sessions. There were 78 percent (85/109) of families with at least one higher-risk individual; virtually half those families (49 percent; 42/85) were represented in the intervention. Overall, 60 adults from 42 families attended these sessions.

High-risk parents then were asked to determine their likelihood of participation in a cardiovascular screening and risk modification program were it not for the family oriented focus of CARES. Eighty-three percent of the high-risk parents responded they would not have participated.

## Discussion

The National Cholesterol Education Program recommends that all adults know their cholesterol level; however, many young and middle-aged adults never seek preventive medical care while they are asymptomatic. Additionally, many adults are resistant to making life-style changes for themselves, particularly changes in diet. Therefore, a twofold problem exists for the health care provider: first, how to attract asymptomatic adults into the screening process while effective primary prevention is still possible, and second, how to make the recommended long-term dietary and life-style changes acceptable to them. Other cholesterol-screening programs have attracted predominantly late middle-aged and elderly segments of the population. Using a school-based family oriented model, we have attracted one of the highest-risk target populations—the 30 to 50 year olds, especially males, who heretofore have been difficult to attract and maintain in preventive medicine programs.

Unlike the policy for adults, mass screening of children for cholesterol levels is a controversial issue. At this time, screening for elevated cholesterol by pediatricians is generally limited to children from families with a history of premature heart disease. Several factors contribute to the present practice among pediatricians to screen only those children believed to be at high risk due to family history:

- the controversy regarding the ideal cholesterol level for children among some members of the pediatric community
- questions concerning efficacy and safety of a lower fat diet for children (malabsorption of fat-soluable vitamins, delayed onset of puberty, diminished growth, anemia, cognitive and affective disorders, and micronutrient deficiencies)
- the assumption that mass screening of all children will not be cost effective due to an expected low yield of children with elevated cholesterol levels
- the widespread *but incorrect* belief that cholesterol levels in children are not predictive of their future adult levels

The present evidence clearly suggests that screening children for elevated cholesterol levels may help identify those at risk of future coronary artery disease, despite the prevalent practice of screening only those children with a strongly positive family history of premature cardiovascular disease. If only those children identified at high risk through family history are screened, it is conceivable that as many as half the children with elevated cholesterol levels will be missed.

For high-risk children, detection may be delayed until one of their parents develops clinically manifest disease, at which time the atherosclerotic process may be well advanced in the children, and intervention may not be as effective. Our study points out that, even in a medically sophisticated community with access to excellent medical care, half the children of our so-called "normal" (that is, asymptomatic and without high-risk history) parents will have previously undetected cholesterol levels well in excess of the currently recommended values.

Our study has shown that the power of family concern, in particular parental concern for offspring, attracts a large number of high-risk asymptomatic adults into screening who otherwise would not have been identified. We also demonstrated the strong correlation between these high-risk asymptomatic adults and their asymptomatic but equally high-risk offspring.

## Conclusions

Therefore we conclude that

- a more widespread recognition of the familial nature of atherosclerotic cardiovascular disease by the general medical community is necessary.
- screening by high-risk history criteria alone does not adequately identify all higher-risk children.
- school-based family oriented screening is an effective method to attract into the health care system asymptomatic high-risk young and middle-aged adults who otherwise may not be identified.
- studies of early dietary intervention, such as the National Heart, Lung and Blood Institute Dietary Intervention Study in Children (DISC) (presently in recruitment) are needed.

**Acknowledgment**

The authors thank the students, families, and faculty of the Beth Tfiloh School, Baltimore, for their cooperation and enthusiasm in participating in this ongoing endeavor. Special thanks to Mrs. Zipora Schorr, Director of Education, whose assistance made this on-site project possible.

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**Contraindications:** There are no known contraindications to the use of 'Tagamet'.

**Precautions:** While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

**Adverse Reactions:** Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

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PLANDEX 35201

# Hyperlipidemia: Treatment with Lipid-Lowering Agents

*JOHN C. LaROSA MD*

**Treatment of lipid abnormalities involves dietary alterations and, sometimes, drug therapy. While many patients do very well with dietary intervention alone, a substantial minority require the addition of a lipid-lowering drug to bring circulating lipid levels into an acceptable range.**

Recently completed clinical trials demonstrated that lowering of plasma low-density lipoprotein (LDL)-cholesterol levels is associated both with an arrest in the progression of coronary atherosclerosis and a lower risk of clinical manifestations of coronary disease, including myocardial infarction.[1,2] Reduction of blood cholesterol can be achieved by dietary changes and by use of medication.

**All patients with elevated lipid levels should be treated first with diet and then with drugs only if diet therapy is unsuccessful. A series of diets with increasing limitations on saturated fat and cholesterol (proposed by the American Heart Association) are useful for all patients with hyperlipidemias regardless of how they are ultimately classified. In general, a trial of at least six months of diet therapy should be made before drug therapy is prescribed.**

## Initial Evaluation of Blood Lipids

Three lipid parameters (total cholesterol, total triglyceride, and high-density lipoprotein (HDL)-cholesterol) are widely available for clinical decision making. Low-density lipoprotein (LDL) can be calculated from the previous three. Other lipid parameters, including measures of apoproteins, have been advocated as better predictors of coronary risk, but they have neither the availability, reliability, nor clinical and epidemiologic data base to warrant widespread clinical use at this time.

**Total cholesterol**, which can now be measured by both finger-stick and automated methods, is perhaps the easiest screening device to identify individuals with lipid and lipoprotein abnormalities. There is general agreement that cholesterol levels over 240 mg/dl are associated with an accelerated risk of atherosclerosis, particularly in the coronary arteries.[3] Similarly, **HDL-cholesterol** (HDL-C) below 35 mg/dl are associated with accelerating coronary risk.[4]

A cut point for **total triglyceride** based on coronary risk cannot be as easily identified, since triglycerides are rather poor independent predictors of coronary risk. However a level of 250 mg/dl, representing about the 95th percentile in the adult American population, is a handy reference point that has been endorsed by a consensus conference on treatment of triglyceride.[5]

**LDL-cholesterol** is important in terms of atherogenesis, and is a focus of the new Adult Treatment Guidelines from the National Cholesterol Education Program.

In summary, a few key cut points will allow you to plan an intervention:

Total cholesterol ≥ 240 mg/dl (about 25 percent of U.S. adult population)
Total triglyceride ≥ 250 mg/dl
HDL < 35 mg/dl
LDL ≥ 160 mg/dl (or ≥ 130 if definite CHD or two other CHD risk factors; one is male sex)

Patients with total cholesterol levels over 200 mg/dl on two occasions should be identified as candidates for intervention therapy. Those with levels between 200 to 240 should be treated with diet alone, and retested after several months. Those with cholesterols over 240 should have HDL-cholesterol and triglyceride determinations. Initially they also should be treated with diet, to both reduce weight, if necessary, and lower intake of saturated fat.

## Specific Lipid-Lowering Agents

Lipid-lowering drugs may be divided conveniently into those that lower total cholesterol (more precisely, LDL-cholesterol) levels and those that lower triglyceride (that is, triglyceride-carrying lipoproteins, including VLDL, chylomicrons, and the metabolic remnants of both) levels (Table 1). All such drugs should be used sparingly, *after* a trial of dietary therapy, *with* continued dietary modification, and with the lowest possible dose necessary to achieve therapeutic goals. All have considerable side effects. In general, drugs should be used only if LDL-cholesterol is above 190 mg/dl in a patient with

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**Table 1. Specific Lipid-Lowering Agents**

| Cholesterol lowering agents | Daily Dose |
|---|---|
| Bile acid sequesterants | |
| Cholestyramine (Questran) | 12–14 gm |
| Colestipol (Colestid) | 15–30 gm |
| Nicotinic acid | 1–6 gm |
| Probucol | 250–1000 mg |
| Neomycin | 1–2 gm |
| Lovastatin | 20–80 mg |
| **Triglyceride Lowering Agents** | |
| Nicotinic acid | 1–6 gm |
| Gemfibrozil | 600–1200 mg |
| Clofibrate | 1–2 gm |

no risk factors or above 160 mg/dl in a patient with two or more other coronary risk factors.

### *Cholesterol-Lowering Agents*

• The **bile acid sequestrants,** cholestyramine (Questran) and colestipol (Colestid) are ion-exchange resins capable of binding bile salts and interrupting their enterohepatic circulation. This, in turn, stimulates the liver to synthesize LDL cell-surface receptors and remove LDL-cholesterol from the plasma so that it can be utilized in the synthesis of bile. The overall result is a fall in circulating LDL and therefore in total cholesterol levels. These drugs are unique in that they are not introduced into the blood stream but act entirely in the intestine. The incidence of serious internal side effects, therefore, is virtually zero, except in small children, in whom they may interfere with the absorption of fat-soluble vitamins.

Currently available bile acid sequestrants are powders taken in liquid suspensions. Major side effects are gastrointestinal and include nausea, bloating, and constipation. All are ameliorated with time. Constipation sometimes requires the temporary addition of stool softeners to the patient's regimen. In combination with a therapeutic diet, doses of up to 12 grams of cholestyramine twice a day or 15 grams of colestipol twice a day are effective in lowering cholesterol levels approximately 25 percent.

Evidence from both the Coronary Primary Prevention Trial and the NIH Type II Intervention Study indicates that long-term treatment with bile acid sequestrants is associated with a reduction in both the risk of coronary manifestations and the progression of coronary atherosclerosis. These drugs are useful in those patients with isolated elevated cholesterol levels.

In patient with both high cholesterol and high triglycerides, bile acid sequestrants should be used cautiously or not at all, since they have a distinct tendency to raise triglyceride levels. This effect may occur even in patients whose triglycerides are not elevated prior to the initiation of therapy. Thus, it is important that not only cholesterol but also triglyceride levels be followed. In some patients, it may be desirable to add a triglyceride-lowering agent to bile acid sequestrants rather than to stop the drug.

Bile acid sequestrants also have been used effectively in combination with nicotinic acid or other cholesterol lowering agents, including probucol (Lorelco) and HMG-CoA-reductase inhibitors (see below).

Since bile acid sequestrants may bind other drugs (in particular, digitalis compounds, thiazides, anticoagulants, and thyroxine), it is important to separate their administration from that of other drugs by at least two hours.

• **Nicotinic acid,** or niacin, is a B-vitamin; given in pharmacologic doses, it has substantial lipid-lowering effects. It acts by inhibiting the synthesis of lipoproteins in the liver and enhancing their breakdown by peripheral cells. It has many salutory effects, lowering both cholesterol and triglyceride levels and raising HDL levels. In doses of anywhere from one to six grams a day, it is useful in the treatment of all three groups of patients discussed. In a long-term follow-up of patients in the Coronary Drug Project who took the drug, coronary mortality rates were lower even though the drug had not been taken for several years.[6]

The major drawbacks of nicotinic acid are related to its side effects: in particular, the almost universal cutaneous vasodilation and flushing that occurs one or two hours after ingestation of the drug. This reaction, which is prostoglandin mediated, can be somewhat ameliorated by ingestion of an aspirin tablet half an hour before taking nicotinic acid. Other side effects include gastrointestinal cramping and nausea, decreased glucose tolerance, hyperuricemia, acanthosis nigricans and other skin rashes, and an increase in atrial arrhythmias. Despite episodic enthusiasm for the use of nicotinic acid, it is, in my opinion, a highly effective lipid-lowering agent whose usefulness is limited by annoying, although not generally dangerous, side effects.

• **Probucol (Lorelco)** is a unique cholesterol lowering agent whose major action is to combine with LDL in the plasma, producing a particle that is more rapidly removed than normal LDL. It produces modest reductions in total and LDL-cholesterol of about 10 to 15 percent. It has little effect on triglyceride levels. In addition to LDL lowering, however, probucol may cause a decline in HDL-cholesterol levels, sometimes proportionately larger than the LDL decline.

Probucol is relatively free of side effects, although

some patients may complain of transient episodes of loose stools, perhaps related to the drug's tendency to enhance bile secretion. In animals, the drug has been shown to increase the QT interval and epinephrine-induced ventricular arrhythmias. Increases in QT intervals also have been demonstrated in man, but there is no evidence they have any clinical significance. Nevertheless, the drug should not be used in those who already have a prolonged QT interval.

Since the primary effect of probucol is to lower LDL levels, it is used in those with elevated cholesterols but normal triglycerides and HDL-cholesterol levels. HDL-cholesterol levels may be lowered by probucol and must be periodically followed. The significance of the probucol-induced decline in HDL is not entirely clear, since long-term therapy with probucol in familial hypercholesterolemia has been demonstrated to decrease the size of tendon and tuberous xanthomas.[7] Until the clinical significance of the drop in HDL is better understood, a useful approach is to calculate the ratio of total cholesterol to HDL. If that ratio does not change with probucol therapy (that is, if there is a proportionate decrease in total HDL-cholesterol), the drug may be continued as long as HDL-cholesterol does not fall below 35. If the ratio rises (that is, if the fall in HDL-cholesterol is disproportionate), or if HDL-cholesterol falls below 35, the drug should be stopped.

• **Neomycin** is an antibiotic that, given orally, is poorly absorbed. In the intestine, however, it precipitates bile salts and decreases the formation of cholesterol containing micelles, thereby interfering with cholesterol absorption. As long as kidney, liver, and gastrointestinal function are normal and the drug is not absorbed into the blood stream, the doses of neomycin necessary to achieve cholesterol lowering (1 gm twice per day) are well below those that may cause renal and eighth nerve toxicity. However, if neomycin is to be used, it is important that evidence of normal renal, liver, and gastrointestinal function be obtained prior to initiation of therapy.

Side effects are otherwise inconsequential. The drug occasionally causes nausea and abdominal cramps. It may interfere the absorption of some digitalis preparations and should be separated by several hours from such drugs.

Because of its potential toxicity, neomycin has not achieved widespread popularity. In combination with bile acid sequestrants, however, it has been shown to be quite effective, lowering total cholesterol levels by as much as 50 percent.[8] It is not useful in those whose triglycerides are elevated. In my opinion, there is insufficient experience with neomycin and sufficient concern about side effects to consider it a drug whose use should be limited to specialized lipid centers.

• **HMG-CoA-Reductase Inhibitors** Agents that inhibit the action of 3-hydroxl-3-methyl-gluteryl-CoA-reductase (HMG-CoA-Reductase), the rate limiting enzyme in cholesterol biosynthesis, are being tested. One, Lovastatin (mevinolin), has been approved for general prescription in the United States. These drugs are highly effective agents with relatively few side effects. In a recently reported multicenter trial of lovastatin in patients with isolated hypercholesterolemia, reductions of total cholesterol levels of 32 percent, of LDL-cholesterol levels of 39 percent, and elevations of HDL-cholesterol of 13 percent were found in patients given 40 mg twice a day.[9]

Thus far, proved side effects with these drugs have been few and have been limited to modest gastrointestinal complaints including flatulence and diarrhea. Small lenticular opacities have been detected in 1 to 13 percent of the patients taking the drug. Such opacities are common in middle-aged individuals in the absence of drug therapy, and the significance of their appearance is difficult to determine. Similarly, liver function abnormalities of uncertain significance have been detected in some patients.

Alone or in combination with other cholesterol-lowering drugs, HMG-CoA-reductase inhibitors promise to be potent agents for the treatment of individuals with elevations of LDL-cholesterol.

### *Triglyceride-Lowering Agents*

• **Nicotinic Acid** is used not only as a cholesterol-lowering agent but also as a triglyceride-lowering agent. Its effectiveness as well as its disadvantages have been reviewed above.

• **Fibric Acid Derivatives** A series of drugs derived from fibric acid including clofibrate (Atromid) and gemfibrozil (Lopid) are useful in the treatment of triglyceride elevations.[10] Another member of this family of drugs, fenofibrate, not yet available in the United States, also has been found useful for lowering LDL-cholesterol.[11] In general, though, fibric acid derivatives have little effect on LDL.

Despite decades of experience with clofibrate, its mechanism of action still is not completely understood. Catabolism of triglyceride-carrying lipoproteins such as VLDL, chylomicrons, and the metabolic remnants of both appears to be stimulated by all fibric acid drugs.

Drugs of this class are useful in patients whose triglycerides are elevated. They are probably most useful in patients who have combined elevations of cholesterol and triglyceride. They are less effective in patients who have elevations of chylomicrons.

As triglyceride levels fall with the use of these agents, HDL-cholesterol levels frequently rise. While

much is sometimes made of this effect, it should be put in perspective. Any regimen that lowers triglyceride levels is likely to raise HDL levels. It is important to note that there is no evidence these drugs are effective in raising HDL-cholesterol levels in individuals whose triglycerides are normal and whose only abnormality is a low level of HDL-cholesterol. Therapy with fibric acid derivatives also may raise LDL-cholesterol levels as triglycerides fall. As triglycerides fall below 500, therefore, it is useful to calculate the LDL-cholesterol levels and add a LDL lowering drug if LDL-cholesterol remains above 180 mg/dl.

Adverse side effects with these drugs generally are minimal. Most have been described with clofibrate, probably because it is older and has been more widely prescribed. Side effects include an increase in lithogenic bile leading, in some patients, to cholelithiasis, to a syndrome of acute muscle tenderness associated with elevated plasma creatine phosphokinase levels, and to enhancement of coumadin anticoagulant effects.[12]

In the Coronary Drug Project,[13] clofibrate lowered triglyceride by 22 percent and cholesterol levels by 6 percent but failed to affect cardiovascular mortality. In the World Health Organization Trial,[14] clofibrate was associated with an excess mortality from gastrointestinal disease, including cancer. In the recently completed Helsinki study,[2] an 8 percent decline in LDL-cholesterol and a 10 percent increase in HDL-cholesterol were associated with a 30 percent decline in coronary risk in middle-aged, hypercholesterolemic men.

Fibric acid derivatives should be used only after there has been an extended trial of both weight reduction and dietary therapy. Isolated triglyceride elevations, in the absence of any of these findings, should not be an indication for drug therapy unless they are over 1000 mg/dl.

### Selection of Patients for Drug Therapy

Persons who fail to reduce their total cholesterol levels below 240 and triglyceride levels below 250 by dietary changes should be considered candidates for drug therapy. It is important to remember that drug therapy for lipid disorders (as for hypertension) is a long-term investment for both the patient and the physician. Risks and side effects that may seem inconsequential in the short term may take on added significance when it is recognized that treatment will be carried on for years. Since commonly occurring diseases such as diabetes mellitus, nephrosis, renal failure, hypothyroidism, and alcoholism may cause or aggravate hyperlipidemia,[15] all patients with hyperlipidemia should undergo a thorough physical and laboratory examination before drug therapy is considered.

Knowledge of the three primary lipid parameters (total cholesterol, HDL-cholesterol, and triglyceride) allows patients to be grouped broadly into categories that are useful in the selection of drug therapy. However, these categories do not define genetic abnormalities. In fact, within each category there are several genetic abnormalities that may result in the overall pattern. These broad categories and the drugs most useful in each are summarized in Table 2.

In **Group A** are patients with elevated levels of total cholesterol but with normal triglycerides and HDL or with slightly depressed HDL.

The only lipoprotein that can account for elevated cholesterol in this group of patients is low-density lipoprotein (LDL). The Adult Treatment Guidelines published by the National Cholesterol Education Program recommend the use of LDL-cholesterol levels as the means for identifying and following patients who are on drug therapy. If triglyceride levels are below 400, LDL-cholesterols can be calculated by the following formula:

$$\text{LDL cholesterol} = \text{total cholesterol} - (\text{HDL-cholesterol} + \text{triglycerides}/5)$$

If triglycerides are over 400, this formula is invalid, and LDL-cholesterol must then be directly measured by

**Table 2. Selection of Drug Therapy by Lipid Abnormalities**

| | Lipid Levels | Drugs |
|---|---|---|
| Group A | Cholesterol > 240<br>Triglyceride < 250<br>HDL < 35 | Cholestyramine<br>Colestipol<br>Nicotinic acid<br>Probucol<br>Neomycin<br>Lovastatin |
| Group B | Cholesterol > 240<br>Triglyceride > 500<br>HDL < 35 | Nicotinic acid<br>Gemfibrozil<br>Clofibrate<br>Bile acid sequestrants should not be used in this group. |
| Group C | Cholesterol > 240<br>Triglyceride 250–500<br>HDL < 35 | Same as Group B. Bile acid sequestrants usually should be combined with clofibrate, gemfibrozil, or nicotinic acid in patients with triglyceride elevations. |

ultracentrifugation, a procedure that requires a specialized lipid laboratory. In my opinion, LDL-cholesterol measurements, while desirable, are not essential as long as it is remembered that total cholesterol is a "stand-in" for LDL and that it is LDL-cholesterol that is being treated. Once HDL-cholesterol levels have been established as either normal or slightly depressed, total cholesterols are reasonably good measurements to identify and follow patients in this group.

The importance of an accurate HDL-cholesterol measurement cannot be overestimated. There are occasional patients who have elevated cholesterol levels resulting from HDL rather than LDL elevations. This is particularly likely to occur in women who are conditioned athletes or are using gonadal hormones. In cases in which the total cholesterol elevation is due only to high HDL levels (generally over 60) and in which LDL levels are normal (less than 140), no therapeutic intervention is necessary.

A second group of patients, **Group B,** are those whose cholesterols are normal or slightly elevated, whose HDL-cholesterols are depressed, and whose triglycerides are very high, generally over 500 mg/dl. The overall risk of coronary disease in this group probably is more related to the extent of their HDL depression than to their triglyceride elevation.

Patients with such high triglyceride levels should be treated with drugs only if they are unresponsive to diet. Such diets include (when appropriate) caloric restrictions to facilitate weight reduction. Drug therapy is indicated if, after a trial of diet, total cholesterol levels are elevated or HDL levels are depressed. In addition, personal or family history of atherosclerosis is an indication for drug therapy. Isolated hypertriglyceridemia, unless triglycerides are very high (over 1000), does not require therapy beyond dietary change. The drugs used in this group of patients are generally different than those used in the first group (Table 2). Caution: the use of bile acid sequestrants such as cholestyramine or colestipol in patients with hypertriglyceridemia may aggravate the lipid abnormality.

**Group C,** the third group of patients, is less common than the first two. These individuals have combined elevations of cholesterol and triglyceride. Generally speaking, triglyceride elevations are more modest than in the second group. HDL levels are moderately depressed. Diet therapy frequently will be sufficient to bring cholesterol levels to approximately 200 and triglyceride levels below 250. Caloric restriction is part of the dietary regimen for those who are overweight. For those whose response to diet is not satisfactory, many of the same drugs used in group II are useful in this group. It is sometimes necessary to add a second drug to bring both triglyceride levels and total cholesterols (that is, LDL-cholesterol levels) to normal levels.

In both the second and third groups, depressed HDL levels will rise as triglyceride levels fall, reflecting the well-known inverse relationship between plasma triglyceride and HDL-cholesterol levels.[16] There are substantial numbers of individuals in the population, however, in whom depressed HDL-cholesterol levels are the only abnormality. As many as 3 percent of the adult American population may have HDL levels below 35 mg/dl in the absence of any cholesterol or triglyceride elevation.[3] Triglyceride lowering drugs (Table 1), which may produce increases in HDL as triglycerides fall, do *not* raise HDL levels in patients with *isolated* HDL depression. Some experts have suggested that, in the absence of any means of raising HDL-cholesterol levels, an alternative is to lower LDL cholesterol levels even when they are not abnormally high. Such therapy, however, is unproved and experimental. If measures such as weight reduction, aerobic exercise, and cessation of smoking fail to raise HDL levels, patients with isolated HDL depressions probably should be referred to specialized lipid centers for further evaluation and therapy.

It bears repeating that no patient with hyperlipidemia should be treated with drugs until an adequate trial of diet, in general for six months, has been attempted. While knowledge of the patient's precise metabolic and genetic abnormality is frequently desirable, it is not generally necessary for the institution of drug therapy. Patients who do not respond to dietary and/or drug interventions should be referred to specialized lipid centers for more sophisticated evaluation and therapy.

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**Jun 20–22 An Advanced Pediatric Life Support Course.** Fee: $415; 20 AMA Cat I credits, other appropriate credits pending. Info: P. Macedonia 301-955-6085.

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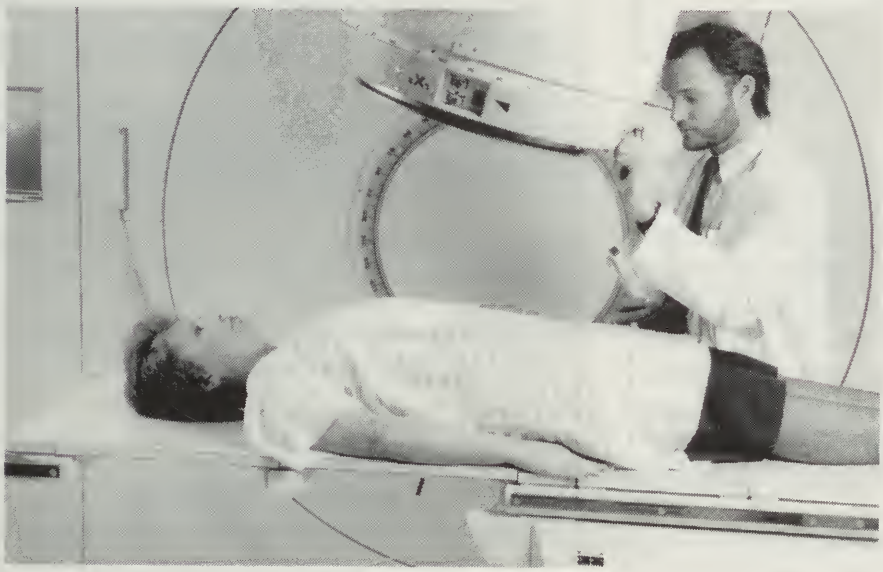
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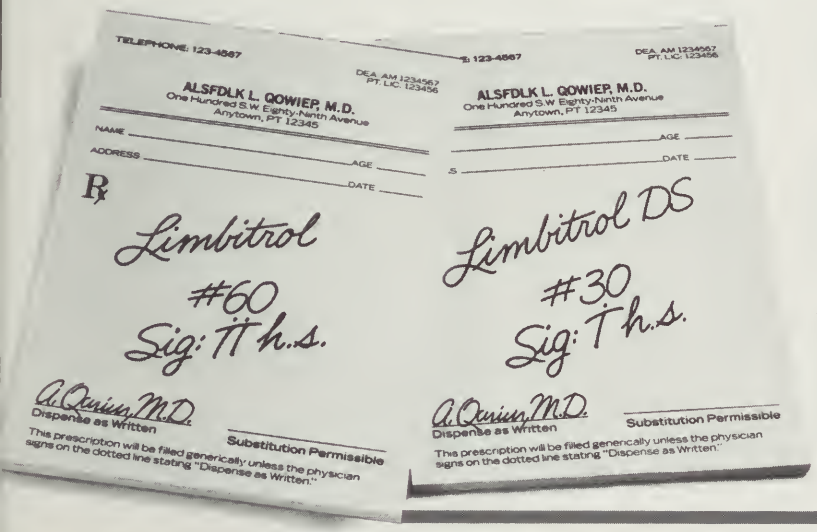
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**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**
Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).
**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.
**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.
**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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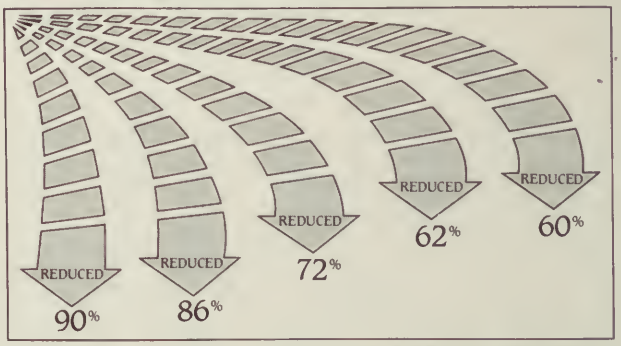
# See Improvement In The First Week...[1]

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- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

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Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




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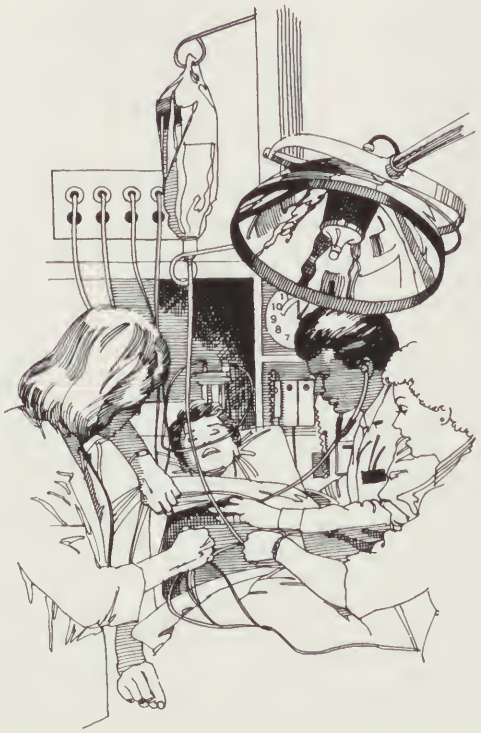
## Fishing for Blues

# MMJ

June 1988

# Maryland Medical Journal

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# KEYS TO THE CURE

Today, physicians are expected to offer much more than comforting words to their patients. As research discoveries change the face of medical science, technological breakthroughs in diagnosis and treatment of many diseases can allow patients to live full and active lives. The doctor's challenge today is to balance scientific solutions to the treatment of disease processes with humane and caring approaches to the treatment of human illness.

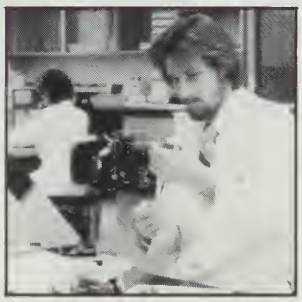
The number of non-meritorius lawsuits filed against physicians -- especially those physicians in the more technical specialties and those in which highly invasive procedures are a part of everyday practice -- indicate that patients are not satisfied with the answers that science alone offers.

While medical science provides physicians with better and more complete answers to scientific questions, these answers are not always satisfactory for the human questions that accompany illness. Human answers are also needed to ease a patient's suffering and build the essential bond of trust between physician and patient. Comfort, sympathy, and old fashioned common sense remain important tools of the physician in treating the whole patient.

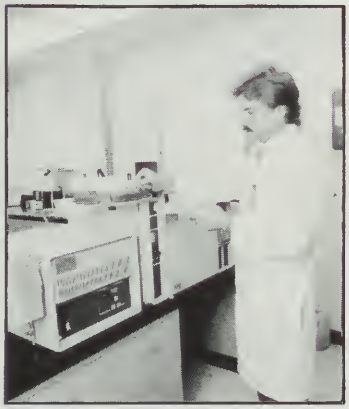
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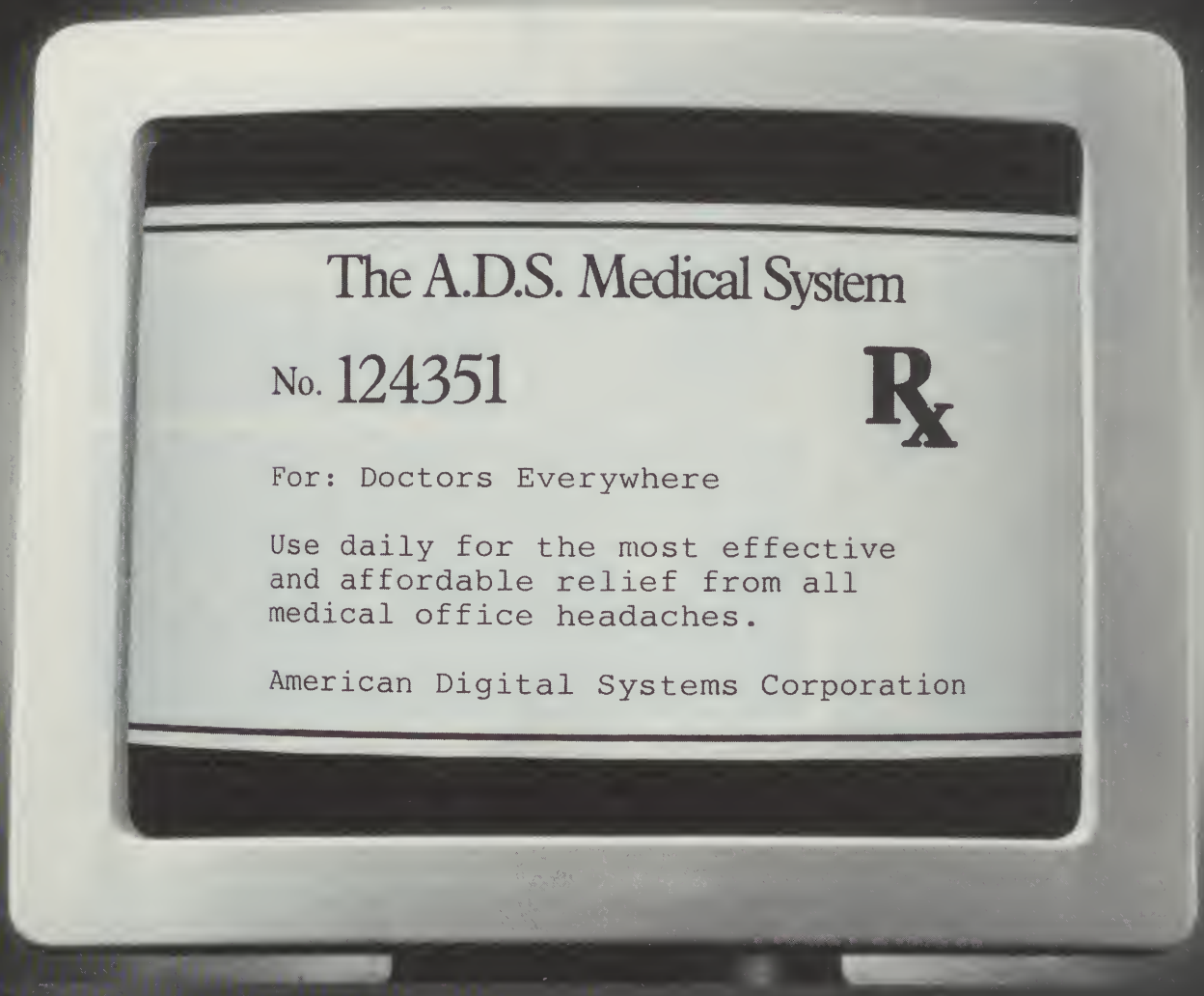
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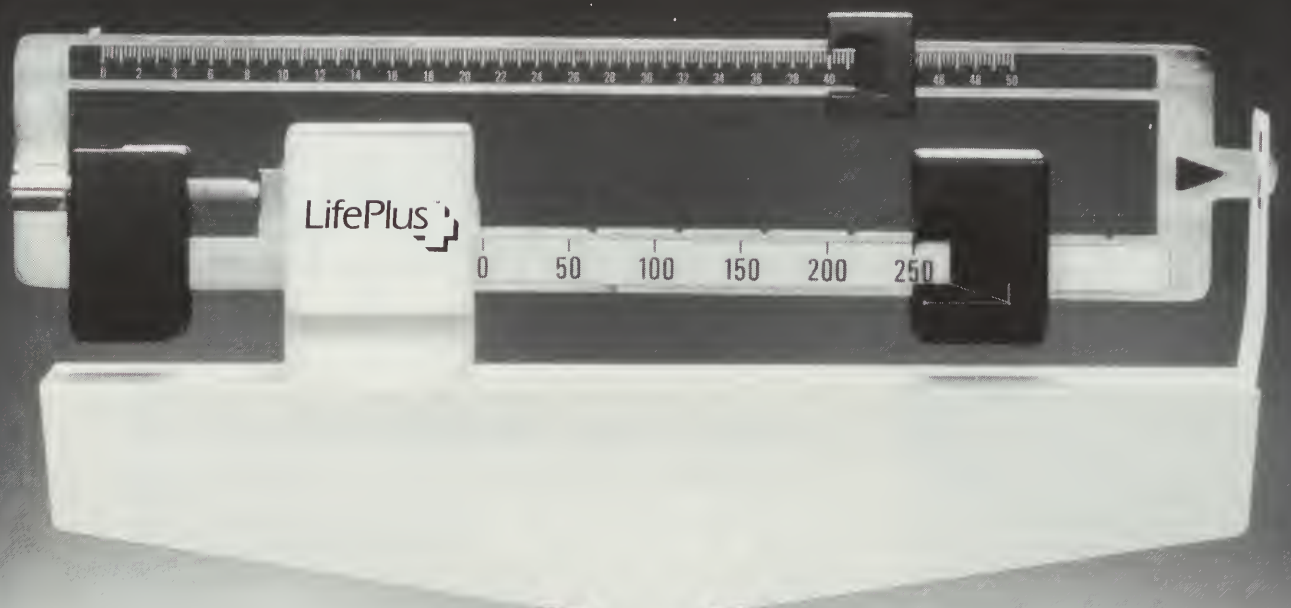
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*Cover photograph* by Edward H. Richardson. Article on the risks associated with bluefishing begins on page 475.

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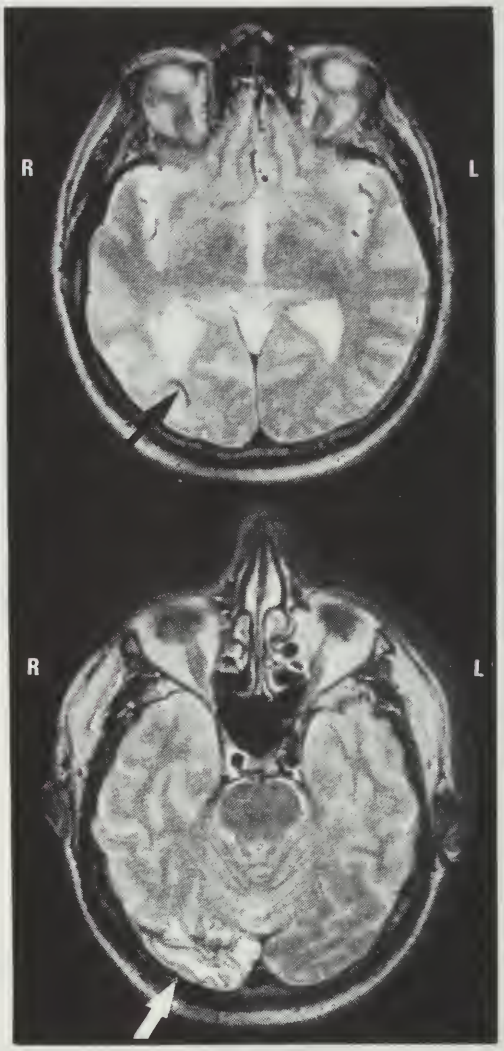
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# MR UPDATE

## MRI Advances the Detection of AVM's

### BRAIN EXAMINATION




**HISTORY:** A 52 year old man had two small right occipital hemorrhages, 18 months apart. After resolution, negative studies included two cerebral arteriograms and contrast CT scans.

**SCAN:** Several dark curvilinear structures, evidence of the flow void phenomenon, indicate abnormal vasculature in the right occipital lobe. Associated high signal intensity of adjacent white matter is compatible with edema, hemorrhage, or gliosis. Together these findings are consistent with occult arteriovenous malformation (AVM).

**MRI HIGHLIGHTS:** MRI is highly sensitive for AVM's which are otherwise occult by arteriography or CT scanning. These may be found in patients with spontaneous hemorrhage, seizure disorder, or other clinical presentations. In addition, the sensitivity of MRI for intracranial hemorrhage is being increased through the use of new partial flip imaging techniques. Refinements in signal processing, surface coils, and other techniques continue to expand the clinical indications of MRI. Because of its sensitivity, safety, and patient comfort, MRI is the screening technique of choice for most CNS abnormalities.

---

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JUNE 1988

## EPIDEMIOLOGY OF PARVOVIRUS INFECTION

Parvoviruses have recently been implicated as the etiologic agent for Fifth Disease, a benign self-limited rash illness in children 5-14 years of age, also known as erythema infectiousum (EI). As parvovirus isolation techniques and serologic tests have improved, parvoviruses have been implicated in other illnesses, i.e., aplastic crisis.

EI was first described 100 years ago and named as the fifth known rash illness, the first four being scarlet fever, rubeola, rubella and epidemic pseudoscarlatina. However, the virus causing EI was not isolated until 1975 and was not associated with human disease until 1980, when parvovirus was isolated from the blood of two British soldiers with febrile illnesses. In 1981, parvoviruses were found in the serum of children with sickle cell-related aplastic crises and in patients with other erythrocyte defects, such as thalassemia, pyruvate kinase deficiency and hereditary spherocytosis. In 1983, parvovirus IgM was found in the serum of British school children with EI. Finally, in 1986, parvovirus and parvovirus IgM were found in children involved in concurrent epidemics of aplastic crisis and EI in Ohio. This represented the first isolation of parvovirus from a patient with EI and temporally linked the causative agent of EI and aplastic crisis, suggesting that parvovirus was the cause of both. Further laboratory studies have supported this finding; human parvovirus has been cultured from the red blood cells of patients with both aplastic crises and EI. The virus infects human erythrocyte precursors causing a temporary erythrocyte suppression. In patients with erythrocyte defects this suppression is enough to produce a transient anemia. The virus also transiently infects any other rapidly dividing human cells, with no known long term effects.

In normal children, parvovirus infection produces EI with the pathognomonic "slapped cheek" appearance. Children may have a low grade fever but generally feel quite well despite the bright red rash. In adults, infection may cause more pronounced symptoms of fever, lethargy, arthralgias and arthritis in addition to a generalized macular rash. Transmission is probably by the respiratory route. The secondary attack rate may range from 10-60%.

Recently, reports of parvovirus-associated fetal deaths have caused concern about the role of this virus in congenital infections. Several reports of fetal death have been associated with recent maternal parvovirus infection, and in some instances parvovirus has been isolated from fetal and placental tissue. The virus has also been associated with hydrops fetalis but to date no congenital anomalies have been associated with parvovirus infection. An ongoing, prospective study on the outcome of parvovirus infection in pregnancy was recently reviewed (California Morbidity #44, November 13, 1987) and preliminary results suggest a small excess risk of spontaneous abortion in women infected with the virus during pregnancy. However, seroprevalence studies indicate that approximately 50% of women of childbearing age have had previous exposure to parvovirus and are therefore not at risk for infection during pregnancy.

Few public health preventive measures are available at this time. Isolation of symptomatic individuals does not prevent secondary transmission because the virus is present in the blood and respiratory secretions of normal infected individuals in the week prior to onset of symptoms. However, patients with aplastic crises should be isolated because they will continue to shed virus for up to a week after onset of symptoms. Commercial tests for parvovirus IgM are unavailable at this time. While parvovirus infection is a benign illness in normal children, it is more severe in most adults, and the impact of parvovirus in congenital infections is unknown at this time.

REFERENCES:

1. ANDERSON LJ: Role of parvovirus B19 in human disease. Ped Infect Dis 6:711-718, 1987
2. Woernle CH, et al: Human parvovirus B19 infection during pregnancy. J. Infect Dis 156:17-20, 1987

**REPRINTED WITH PERMISSION FROM:** "California Morbidity Weekly Report from the Infectious Disease Branch", State of California, Health and Welfare Agency.

**NOTE:** The reported causal association between human parvovirus B19 infection during pregnancy and fetal death has concerned both pregnant women and their clinicians. Data from the current literature may help place such concerns into balanced perspective:

- --risk of B19 related fetal death is greatest when the exposure and infection occur during the first 18 weeks of pregnancy;
- --following maternal infection, the rate of fetal death from B19 is approximately five percent;
- --following household exposure to B19, a pregnant susceptible woman has an approximate one to three percent risk of fetal death; and,
- --following school exposure to B19, a pregnant susceptible teacher has an approximate 0.5 to one percent risk of fetal death.

**REFERENCES:**

1. Anderson, LJ and ES Hurwitz: Human Parvovirus B19 and Pregnancy. **Clinics in Perinatology**, Vol. 15, No. 2,pp 77-90, June 1988.
2. Gary, William: CDC (personal communication).

# Human Ehrlichiosis--United States

Ehrlichia, members of the family Rickettsiaceae, are obligate, intracellular bacteria that parasitize mononuclear or polymorphonuclear leukocytes. The ability of Ehrlichia to infect and cause disease in animals is well documented. Canine ehrlichiosis, also known as tropical canine pancytopenia, is caused by E. canis and has an acute and chronic phase. After an incubation period of 10-14 days, dogs develop an acute febrile illness that may include depression, anorexia, lymphadenopathy, and thrombocytopenia. The chronic phase of the disease, which is often fatal, is characterized by pancytopenia and bone marrow hypoplasia. In the United States, serological evidence of E. canis infection has been reported among dogs in at least 34 states.

Preliminary data suggest that human ehrlichiosis, like canine ehrlichiosis, is tickborne. Although canine ehrlichiosis is transmitted by the brown dog tick, Rhipicephalus sanguineus, this tick is probably not the main vector or reservoir involved in human transmission since it rarely bites people. There is no evidence that human ehrlichiosis is transmitted directly from dogs to people.

Before 1986, only one Ehrlichia species, E. sennetsu, had been recognized as a human pathogen. Infection with E. sennetsu results in an acute febrile illness with lymphocytosis and postauricular and posterior cervical lymphadenopathy similar to mononucleosis. To date, this disease has been found only in Japan and Malaysia. Currently, the diagnosis of human ehrlichiosis is based on an IFA test that shows a fourfold or greater increase or decrease in antibody titer against E. canis with a minimum titer of 80. The test is a modification of the IFA test used for canine ehrlichiosis.

Tetracycline has been shown to be effective in both the acute and chronic phases of canine ehrlichiosis. Human ehrlichiosis appears to respond to tetracycline administered at the same dose and schedule used for RMSF. However, insufficient data exist to recommend chloramphenicol as an alternative antibiotic.

Physicians should consider the possibility of ehrlichiosis when patients have a febrile illness and a history of recent tick exposure. The diagnosis can be confirmed by testing acute-and-convalescent-phase serum samples (taken 2-4 weeks apart) for E. canis antibody. Serologic testing for E. canis antibody is available at CDC. Only serum specimens submitted as pairs (i.e., acute- and convalescent-phase samples) will be accepted for testing. Specimens should be submitted to CDC through state health departments.

**REFERENCES AVAILABLE UPON REQUEST.**

**SOURCE:** Morbidity and Mortality Weekly Report (MMWR), Centers for Disease Control, May 6, 1988/Vol. 37/No. 17.

**TABLE 1. Drugs used in the prophylaxis and presumptive treatment of malaria**

| Drug | Prophylaxis | | Presumptive Treatment for Travelers to Areas of Chloroquine Resistance | |
|---|---|---|---|---|
| | Adult Dose | Pediatric Dose | | |
| Chloroquine phosphate (Aralen®*) | 300 mg base (500 mg salt) orally, once/week | 5 mg/kg base (8.3 mg/kg salt) orally, once/week, up to maximum adult dose of 300 mg base | Chloroquine is not recommended for the presumptive treatment of malaria acquired in areas of known chloroquine resistance. | |
| Hydroxy-chloroquine sulfate (Plaquenil®*) | 310 mg base (400 mg salt) orally, once/week | 5 mg/kg base (6.5 mg/kg salt) orally, once/week, up to maximum adult dose of 310 mg base | Hydroxychloroquine is not recommended for the presumptive treatment of malaria acquired in areas of known chloroquine resistance. | |
| Doxycycline | 100 mg orally, once/day | >8 years of age: 2 mg/kg of body weight orally, once/day up to adult dose of 100 mg/day | Tetracyclines are not recommended for the presumptive treatment of malaria. | |
| Proguanil (Paludrine®*) | 200 mg orally, once/day, in combination with weekly chloroquine | <2 yrs: 50 mg/day<br>2–6 yrs: 100 mg/day<br>7–10 yrs: 150 mg/day<br>>10 yrs: 200 mg/day | Proguanil is not recommended for the presumptive treatment of malaria. | |
| Pyrimethamine-sulfadoxine (Fansidar®*) | 1 tablet (25 mg pyrimethamine and 500 mg sulfadoxine) orally, once/week | 2–11 mos: ⅛ tab/wk<br>1–3 yrs: ¼ tab/wk<br>4–8 yrs: ½ tab/wk<br>9–14 yrs: ¾ tab/wk<br>>14 yrs: 1 tab/wk | **Adult Dose**<br>3 tablets (75 mg pyrimethamine and 1,500 mg sulfa-doxine), orally, as a single dose | **Pediatric Dose**<br>2–11 mos: ¼ tab<br>1–3 yrs: ½ tab<br>4–8 yrs: 1 tab<br>9–14 yrs: 2 tabs<br>>14 yrs: 3 tabs<br>as a single dose |
| Primaquine | 15 mg base (26.3 mg salt) orally, once/day for 14 days, or 45 mg base (79 mg salt) orally, once/week for 8 weeks | 0.3 mg/kg base (0.5 mg/kg salt) orally, once/day for 14 days, or 0.9 mg/kg base (1.5 mg/kg salt) orally, once/week for 8 weeks | Primaquine is only recommended for use after leaving an endemic area to prevent relapses of *Plasmodium vivax* and *P. ovale*. | |

*Use of trade names is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services or the Public Health Service.

# The Personality Disorder Treatment Program of Sheppard Pratt Hospital.

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If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Admissions Office, (301)339-4070, The Sheppard and Enoch Pratt Hospital, 6501 North Charles Street, P.O. Box 6815, Baltimore, MD 21285-6815.




THE PERSONALITY DISORDER TREATMENT PROGRAM

# Highlights: Executive Committee and Council Actions

*Executive Committee—February 18, 1988*

• **Approval of Minutes** The Executive Committee approved the minutes of January 14, 1988 as distributed.

• **Committee on CME Review** Payment for Continuing Medical Education (CME) surveys conducted by this committee was discussed extensively. The Executive Committee adopted a motion to table the issue until its next meeting and directed staff to review the issue and provide additional information at that time.

• **Public Relations Committee** The Executive Committee agreed with the recommendation of the Public Relations Committee that Med-Chi not lend its name and/or monetary support to any radio programs other than "Consultation" and approved a draft letter to Donald Pachuta MD responding to his request for Med-Chi's support of his radio talkshow.

The Executive Committee endorsed the recommendation of the Public Relations Committee that John Dennis MD, Dean, University of Maryland, be honored during the Annual Meeting for his outstanding contributions to the practice of medicine throughout his career.

• **Nominees for Board of Nursing Home Administrators** The Committee approved the following nominees to be submitted to the Secretary of Health for consideration for appointment to the State Board of Nursing Home Administrators: Joseph Gladue MD, who presently serves on the Long Term Care and Geriatrics Committee, and Ronald E. Cann MD.

• **Physician Referrals** Legal Counsel Jean Bienemann reported on the request of the Faculty to have the Commission on Medical Discipline include as one of the disciplinary conditions in the consent order the following requirement: *A physician shall request that his name be removed from any referral list kept by the Faculty or its component societies.* The Commission was to discuss this proposal on February 19, 1988.

It also was noted that each component society would adopt appropriate bylaw language that would permit the removal of a physician's name from its referral list if the physician had disciplinary action taken against him by the Commission on Medical Discipline.

In the course of the discussion, the Executive Committee directed that an opinion be sought from the Office of the Attorney General on liability of a referring physician for his referral to another physician. The staff was asked to inquire about any restraint of trade problem that might exist in such a referral situation.

• **Blue Cross/Blue Shield "Blue Line"** The Committee reviewed the Blue Cross/Blue Shield "Blue Line," an automated system to assist health care providers in obtaining information on the eligibility, benefit, and claim status of BC/BS members. The system is in effect, and there is no charge to gain access to the information.

• **Medical Radiation Technologists** The Executive Committee was informed of proposed legislation that would provide an exception for certain medical radiation technicians from the certification requirements. The Committee indicated its support for the bill (HB 612) but felt that further clarification of the definition of the term "medical radiation technologist" was necessary.

• **Peer Review Update** Michael Dobridge MD updated the committee on the current status of the Peer Review task force, reviewed the group's recent actions to respond to media reporting regarding physician discipline, and discussed the Governor's legislative proposal for a restructured Board of Medical Quality Assurance.

Norbert Picha provided a status report regarding outstanding complaints received by the Faculty from the Commission on Medical Discipline; this will be a continuing monthly report to the Executive Committee.

• **Legislative Update** Gerard Evans presented an overview of the pertinent legislative bills being considered by the 1988 General Assembly.

• **Membership Recruitment** Michael Murray reported that contact has been established with those county component medical societies with staff and with a single hospital in the county, and that refinement of recruitment efforts is being coordinated with the leadership of these societies. He also stated that a personal contact (peer-to-peer) program is planned with staff support provided by the Faculty where needed.

The second phase of the recruitment program will occur in conjunction with the larger component societies, some of which have membership recruitment programs in place. Faculty staff will be available to enhance existing programs and will help to coordinate efforts to recruit potential members using the Faculty data base.

• **Emergency Physicians Proposal** It was reported that the proposal developed by the Maryland Chapter, American College of Emergency Medicine, is under study by the Faculty's Liaison Committee with the Department of Health and Mental Hygiene. A report from that Committee will be provided to the Executive Committee at its next meeting.

The Liaison Committee with the Department of Health and Mental Hygiene also has under study the state health department budget proposal to direct state-funded General Public Assistance patients to managed health care systems. This review issue will be continued by the Liaison Committee, and the Legislative Committee also will be apprised of the proposal since budget hearings will be conducted in Annapolis.

• **HMO/Delmarva Health Plan** The Committee reviewed correspondence received from Dr. Terry Dietrich regarding the Delmarva Health Plan. While the problem involving the referral of a specific patient to a physician not contracting with the HMO has been resolved, a question arose regarding the appropriateness of a physician associated with the health plan also working with a review agency designated by the federal government. This question will be pursued through the PRO Monitoring Committee.

• **Maryland Foundation for Health Care** Executive Director Angelo Troisi reported an agreement has been negotiated with the Maryland Foundation for Health Care to amortize the Foundation start-up costs advanced by the Faculty in 1985. The conditions set forth in the Letter of Understanding dated February 18, 1988 were approved by the Executive Committee.

• **Quality Assurance Board** Dr. Dobridge reported he has been actively seeking physicians who may be interested in serving on the proposed Board of Medical Quality Assurance, and that all applicants will be interviewed prior to recommendation for appointment.

• **Physician Discipline System** The Committee considered a letter received from the Baltimore City Medical Society that stated the society's position and suggested amendments to House Bill 855. This issue was referred to the Legislative Committee for its consideration.

• **Med-Mutual Proxies** Reynaldo Lee-Llacer MD led a discussion concerning the development of a slate for Med-Mutual proxies and stated that the component societies would be solicited for nominees for the following seats on the Med-Mutual Board for the election on April 26, 1988:

Raymond M. Yow MD
Gerald J. Carroll MD
Thomas J. Rohe, III
Edward J. DellaVecchia
Angelo J. Troisi

Should additional names be considered, the timing would be as follows:

Names, plus 50 signatures supporting each name, must be submitted to Med-Mutual by March 20, 1988

The five proxy carriers will be contacted to determine if they have received any names and will be informed that they should meet within in the very near future to develop an appropriate representative slate.

### *Executive Session*

• **Committee on Emotional Health** The Executive Committee reviewed a proposal from the Committee on Emotional Health as submitted by Gary Nyman MD. It was reported the Legislative Committee at its February meeting decided that while it was important to support the concept of no discrimination among a class of physicians (that is, clinical vs. administrative), it would be inappropriate to attempt to change specific salaries within the Department of Health that would affect only a specific class of employee, physicians. The Executive Committee concurred with the decision of the Legislative Committee.

• **MMLR** The Committee reviewed letters written by Dr. Finney to Dr. Kassel and to Governor Schaefer. After considerable discussion, the consensus was that no further action is warranted in this matter.

• **Med-Chi Financial Assets** The financial assets of Med-Chi were reviewed, and it was decided that quarterly reports will be provided to the Executive Committee for their review.

### *Council—March 26, 1988*

• **New Councilor** Dr. Lee-Llacer, Chairman, introduced Dr. Henry P. Laughlin, newly elected councilor of the Frederick County Medical Society.

• **Emeritus Membership** The Council approved the following members (all retired) for Emeritus Membership, at the request of the component society indicated:

| | |
|---|---|
| Allegany County | Thaddeus H. Elder, Jr., MD<br>Cumberland |
| | William P. Iames MD<br>Cumberland |
| | Vincente M. Valls MD<br>Cumberland |
| Anne Arundel County | Steven J. Abramedis MD<br>Annapolis |
| Baltimore City | Ruth W. Baldwin MD<br>Baltimore |
| | John T. Chissell MD<br>Baltimore |
| | Paul G. Herold MD<br>Cockeysville |
| Montgomery County | William F. Colliton, Jr., MD<br>Silver Spring |
| | Albert F. Fleury MD<br>Chevy Chase |
| | William J. Hogan MD<br>Rockville |
| | Doris L. Plough MD<br>Bethesda |
| | H. H. Rosenthal MD<br>Silver Spring |
| | Ralph Stiller MD<br>Silver Spring |
| | William Tenenblatt MD<br>Silver Spring |
| Prince George's County | John P. D'Angelo MD<br>Suitland |
| Washington County | Aubrey F. Haynes MD<br>Hagerstown |
| Worcester County | Arthur T. Hall, Jr., MD<br>Ocean City |
| Affiliate Member | Nicholas White MD<br>Boca Raton, Florida |

• **Committee on Professional Ethics** The following ethical opinions, presented by Dr. Louis C. Breschi, Chairman of the Committee on Professional Ethics, were approved by the Council.

*Sale or Closing of Medical Practice* Whenever a physician's medical practice is closed or sold, notice to patients and continuity of care must be the primary concerns. Active patients should be notified as soon as possible. This may be accomplished by several different methods including, but not limited to, the following:

(a) Letter or postcard
(b) Newspaper ad
(c) Answering machine

*Physician's Death or Illness* Should a sudden need arise to close a practice due to a physician's sudden death or illness, the next of kin should consult the physician or physician's will for direction. A physician should address this issue in his will or a letter of instruction in order that his next of kin have some direction should he die suddenly.

If a physician's will or letter of instruction does not address this issue, the next of kin can either approach another physician to assume the practice and notify the patients, or approach the medical society for assistance.

*Fees for Assisting at Surgery* A surgeon who requires a physician as an assistant should inform his patient of the necessity for a surgical assistant. It is appropriate for a physician who acts in the capacity of a surgical assistant to bill a patient a fee that is prevalent in the community. The patient should be informed before the procedure of any charge above this fee.

*Referrals Between Physician Spouses*

500. Professional Income and Fees

501. Division of Fees

The following arrangements tend to exploit the patient for financial gain and, therefore, constitute an unethical division of fees:

01 A voluntary prospective agreement between physicians for division of medical fees which is not based upon the physicians' services, responsibility, experience, or other contributions.

b) Husband/Wife Physician Teams—Referrals between spouses are not inherently unethical. However, the best interests of the patient must always be foremost. When making such referrals, the spousal relationship must always be disclosed to the patient as well as the availability of other consultants in that specialty. It is unethical to make medically unnecessary or excessive referrals between spouses.

*Ethical Relationship of Treating Physician to Patient Involved in Litigation* In any litigation in which a patient's medical condition is at issue and that discloses the nature of the relationship of the physician to his patient, in the absence of a subpoena, the physician's is free to testify or not. The testimony of the physician is expected to be honest and without prejudice to either party.

*Review of Policy Statements of Council* The following motion was adopted by the Council:

That the Committee on Professional Ethics review and update any policy statements of the Council contained in the *Compendium of Laws, Regulations and Opinions and Policies Governing the Practice of Medicine in Maryland* (*November, 1984*) and its *Supplement* (*November 1985*).

*Physician Rehabilitation Services* The acceptance or nonacceptance of nonphysician members of Med-Chi into the physician rehabilitation program offered by Med-Chi was referred for study to an ad hoc committee. The ad hoc committee will be formed by the chairmen of the Committee on Physician Rehabilitation and the Committee on Professional Ethics.

• **Dr. Malouf** The Chairman announced that Dr. George Malouf, Sr. was selected as Prince Georgian of the Year by the Prince George's County Government for outstanding citizenship.

• **Committee on Hospital Medical Staffs** Victor Hrehorovich MD, Chairman of the Committee on Hospital Medical Staffs, upon recommendation of the Executive Committee, presented the following resolution which was adopted unanimously by the Council:

*Resolved*, That the Medical and Chirurgical Faculty stay abreast of current actions in quality assessment and assurance as communicated by the American Medical Association, and that periodic reports be provided to the Council on current AMA quality assessment initiatives by the Committee on Hospital Medical Staffs; and

*Resolved*, That the Medical and Chirurgical Faculty of Maryland explore initiatives for the development of quality assessment and assurance programs including applications for grants.

• **Maryland Health Convocation** The Council approved the expenditure of $2100 for full sponsorship of the Convocation for the year 1988. It was suggested that the Faculty should obtain the most effective speakers available for the Convocation.

• **Role Relationship Committee Report** Roland Smoot MD, Chairman, presented the report of the Ad Hoc Committee to Study Role Relationships and discussed the deliberations of the committee resulting in the following motions acted upon by the Council:

1. Motion: That the Council approve the concept of establishing specialty society representation within the Faculty's House of Delegates.

After some discussion, the motion was approved as presented.

2. Motion: That the Council appoint a committee to develop admission criteria of such specialty society delegates to the Faculty House of Delegates. Such admission criteria to include membership in Med-Chi of any officer or other specialty delegate or representatives who wish to address the Faculty House of Delegates and that such specialty societies have at least 75% of their members as Med-Chi members.

Following discussion, Dr. Smoot moved that the Council Chairman appoint a committee to develop admission criteria of such specialty society delegates to the Faculty's House of Delegates. After some clarifying discussion, it was approved that this matter be referred back to the Role Relationship Committee for determination of criteria and that such criteria be submitted before the Council prior to any further action.

3. Motion: That the Council Chairman establish and appoint five subcommittees of the Council as follows:
   a. Subcommittee of the Council on Medical Practice
   b. Subcommittee of the Council on Legislation
   c. Subcommittee of the Council on Public Health
   d. Subcommittee of the Council on Membership Services
   e. Subcommittee of the Council on Scientific Affairs

Discussion on this issue included comments that such an effort would be duplicative and would not be necessary. Other comments were that rather than to identify an individual or a subcommittee of the Council as responsible for reviewing minutes of committee groupings, that perhaps every member of the Council should be provided with copies of all of the minutes of all committees. It also was suggested that perhaps staff should prepare a synopsis of actions taken by committees. Dr. Kassel stated that there should be some kind of organization to accomplish the task and that staff

should not be required to summarize the voluminous amount of work done by the committees.

After further discussions, it was moved, seconded and approved to remand this matter to the Role Relationship Committee for further evaluation and necessary action.

4. After clarification, Dr. Smoot moved that the Council accept the succession of the presiding officers to be as follows:

   Should the President be temporarily unable to preside over the House of Delegates, the President-elect would be next in line as presiding officer, followed by the First, Second and Third Vice Presidents, in that order.

5. The Council accepted the report of the ad hoc committee but did not approve the recommendation that the committee be disbanded at this time because of the issues remanded to the committee for further evaluation.

• **Building Fund** Dr. Malouf, Chairman of the Building Fund, in recognition of the Maryland Society of Eye Physicians and Surgeons' contribution to the Med-Chi Building Fund, presented its President, Dr. Gordon Heiner, with a framed picture of the Faculty building.

• **Maryland Foundation for Health Care** Michael Murray reported that the Foundation has established a repayment fund to return start-up costs advanced by the Faculty in 1985. Discussion ensued regarding the current federally designated professional review organization with respect to its administration and impact upon hospitals and physicians. Dr. Dobridge suggested that some appropriate liaison be initiated with hospital groups regarding this problem.

• **Council Meeting Attendance** The Council discussed at length the question of whether to continue to hold its meetings on Saturdays as opposed to Thursdays. Following the discussion, it was the Council's decision that a letter be sent to those component societies whose councilors have not been attending Council meetings on a regular basis and suggesting that perhaps a replacement is in order.

• **Relative Value Scale (RVS)** Mr. Troisi informed Council of a meeting with the AMA that he would attend on Monday, March 28, in Chicago for discussions on the Relative Value Scale. He also mentioned that the memorandum distributed to the Council describing the status of the Harvard/AMA RVS Project had been sent to the component and specialty societies. Mr. Troisi reported that the AMA had come out with a clarification of the Massachusetts Medical Society's statement regarding the RVS.

• **Malpractice Insurance Preliminary Survey** Preliminary results of a malpractice insurance premium survey were distributed. Specialties addressed in the survey were: obstetrics, emergency medicine, neurosurgery, and orthopedic surgery. Mr. Troisi commented that the survey results provide a stimulation of thought and concern regarding the intentions of certain specialty physicians if malpractice premiums are increased. He pointed out that staff will further evaluate the results by physician age and geographical location. Dr. Fastow cautioned about publishing the results based on what may be the true intent of the physicians surveyed. He suggested that Med-Chi request a copy of the Med-Mutual annual report for review by the Faculty. The Council Chairman indicated this would be done.

• **HCFA's Policy on Medical Necessity** David Nagel MD reviewed for the Council members correspondence that included (1) a letter of denial and request for retroactive payment by the physician to the patient from Blue Cross/Blue Shield, (2) a letter from the physician to Blue Cross/Blue Shield appealing the decision, and (3) a letter from Blue Cross/Blue Shield to the physician reversing their denial.

Dr. Nagel stated that he believed that it was important to pursue this matter because of the way in which this kind of notification was damaging the physician/patient relationship.

Dr. Lichtenfeld stated that these denial letters were done by computer screening and that the carrier's medical department makes no review of the claims. He further stated that this action was a violation of the fundamental policy of physicians' quality of care review. Dr. Nagel indicated that we should await the response from Maryland Blue Cross/Blue Shield to Med-Chi's letter of March 24 in which we requested information relative to their action.


***Med-Chi Physician Rehabilitation Program***

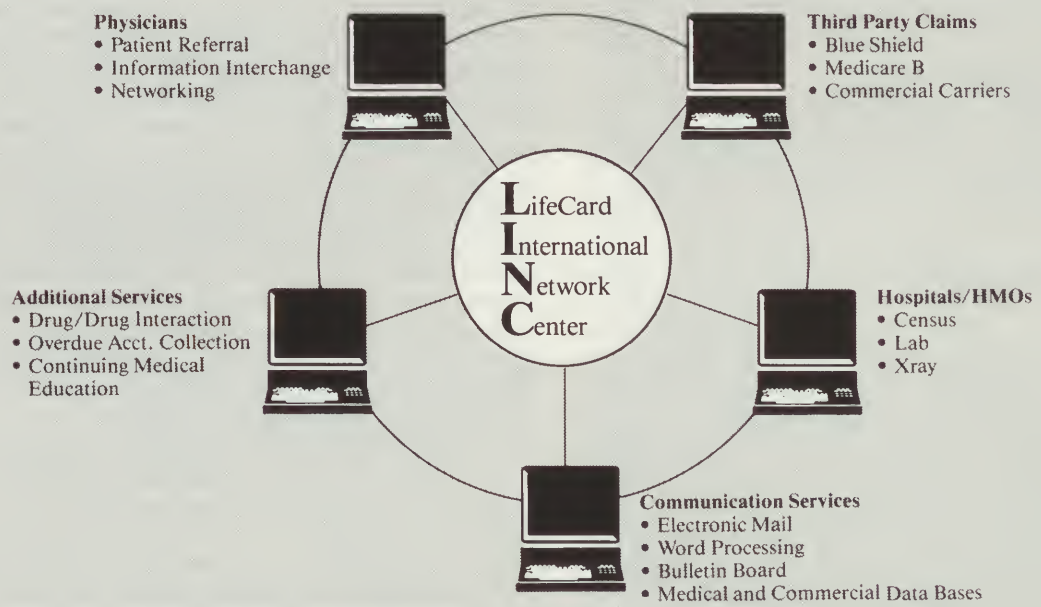
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# Executive Director's Newsletter

June 1988

**TAX-EXEMPT STATUS**

The tax-exempt status of the AMA and medical societies is again being threatened as a direct result of continued private sector concerns that nonprofit hospitals and universities have unfair business advantages. In a surprise action, the Oversight Subcommittee of the House Ways and Means Committee adopted an "aggregation" proposal that could strip nonprofit organizations with profit-making subsidiaries of their tax-exempt status.

Aggregation would allow the IRS to deny an organization this status if it determines the organization's "primary purpose" is no longer charitable. This approach would prevent many medical associations from providing vital public services such as accreditation, peer review, and medical assistance to citizens unless these programs were funded solely through dues income.

In a major effort to counter the pending proposal, the AMA has issued a strong call to action urging Federation leadership and individual physicians to contact all their Members in the House of Representatives during the recess to state the compelling case against the pending proposal and the detrimental effects it would have on the profession and the public.

**PHYSICIAN QUALITY ASSURANCE**

On May 24, 1988 the Faculty submitted a list of physician nominees for the Board of Physician Quality Assurance to Governor William Donald Schaefer in accordance with Section 14-202A (2)(i) of Senate Bill 508 (Medical Discipline - State Board of Physician Quality Assurance). The list was developed by canvassing all component medical society presidents, specialty society presidents, and chiefs of staff in each Maryland hospital. In addition, legal notices were placed in both the Baltimore Sun and Washington Post for the purpose of public solicitation.

All names were reviewed by Med-Chi's Council with the following considerations: geographic, specialty, and minority representation; as well as dedication to the profession of medicine; objectivity; integrity; a sincere desire to serve; and the willingness to commit to the time required to serve on the Board.

**PROFICIENCY TESTING**

On May 16, 1988, the Laboratories Administration notified over 600 physicians of the statutory requirement that a physician must be enrolled in a proficiency testing program if he or she performs procedures for which proficiency testing is required. This is not new law having been on the books since 1982. It is now being implemented on the basis of information obtained from the laboratory operations survey sent to physicians with the application for license renewal. Members are urged to comply with the law and to enroll in a proficiency testing program if they perform tests that are not exempt from the program.

Each year, the Division of Laboratory Licensure Certification and Training reviews the list of tests that are exempt from the program. If you would like a particular test added to the list of exempt tests, submit the request and reasons for including the test on the exempt list to Med-Chi. Faculty staff will coordinate your requests with the specialty societies and present the information to the secretary of Health and Mental Hygiene.

To counteract some misinformation that physicians may have received, the Faculty wants all physicians to be aware that two instruments, the QBC machine and the reflotron, must be proficiency tested.

All laboratory testing by physicians in their offices is under scrutiny by the legislature. Med-Chi was successful during this past legislative session in defeating SB 659, which would have abolished the right of physicians' small practices to maintain medical laboratories. If the legislature can be shown that physicians are complying with the existing laws and regulations on proficiency testing, a stronger argument can be made against further governmental regulation of laboratory testing by physicians in their offices.

**LIVING WILLS**

The living will is a legal document used by patients to direct physicians as to their wishes regarding the withholding or withdrawal of life-sustaining procedures. The living will cannot be achieved "by the

denial of food, water, or of such medication and medical procedures as are necessary to provide comfort, care, and to alleviate pain." Implementing the living will by denial of food and water is prohibited under the same law that enacted the living will. The Attorney General's Office is working on an opinion that will explore this issue. It is not clear that the prohibition against the denial of food and water as it applies to a living will patient has any impact on a person who does not have a living will. The physician should contact the hospital's ethics committee (or its equivalent) and the hospital's legal counsel for help in circumstances concerning termination of medical care.

**NICOTINE AS ADDICTIVE AS HEROINE**

In response to the US Surgeon General Everett Koop's report stating that nicotine, like heroine or cocaine, is physiologically addictive, Alan R. Nelson, Chairman of the AMA's Board of Trustees, issued the following statement to the media:

> This report and the Surgeon General's findings should compel federal and state authorities to treat tobacco as the addictive drug that it is by raising the age of purchase to 21, banning access to tobacco products through vending machines, labeling tobacco products as addictive, banning advertising and promotion of tobacco products, and regulating all forms of nicotine delivery including newly developed products.
>
> This report is important because it calls attention once again to the consequences of tobacco use. In issuing the report, Dr. Koop reaffirms the importance of achieving the goal of a tobacco-free society and calls on policy makers to give the problem immediate attention.

**NURSING SHORTAGE**

Norbert Picha, Med-Chi staff member, recently attended an Invitational Workshop, "Taking Action to Resolve the Nursing Shortage," jointly sponsored by the Department of Health and Mental Hygiene, the University of Maryland School of Nursing, and the Maryland Hospital Association Center for Nursing.

The Workshop was held to obtain ideas for the implementation of the Report of the Governor's Task Force to Study the Crisis in Nursing. It is

anticipated that the direct interaction and commitments made during the meeting will help propel Maryland toward resolving this critical issue.

**MED-SIG**

On Tuesday, May 24, 1988, Joseph Jensen, Med-Chi staff member, presented a report on MED-SIG, the Faculty's computer bulletin board during the annual meeting of the Medical Library Association in New Orleans. Mr. Jensen was one of three medical society panelists who addressed the topic of "Keeping Pace with Change: Some Innovative Approaches of Medical Society Libraries." The other panelists were Pamela Van Hine from the American College of Obstetricians and Gynecologists and Arthur Drowning of the New York Academy of Medicine.

**CHEMICAL HAZARDS**

Physician employers must implement written programs advising their personnel of chemical hazards that exist in their job settings and establish specific safeguards. As of May 23, 1988, all physicians must be in compliance with the Hazard Communications Standard (HCS) of the Occupational Safety and Health Administration (OSHA) from which physician employers were previously exempt. Physicians must keep warning labels on containers, obtain material safety data sheets from OSHA and make them available to personnel, and train all employees regarding their exposure to chemical hazards.

Drugs in solid, final form for direct administration to patients are excluded from the HCS requirement. Liquid, oral, and injectable drugs also are excluded since issues concerning them have not been resolved by OSHA and the Office of Management and Budget. The OSHA standard, which is now being extended to all employers, was published in the August 24, 1987 Federal Register. Physicians wishing to obtain interpretations regarding specific applications of the HCS should contact Terry Mikelson at OSHA (202-523-6027), or contact the nearest OSHA office.

Angelo J. Troisi, FACHE
Executive Director

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# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethical of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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### Consent by a minor for Treatment or Operation

The following is a summary of Maryland law on treatment of minors:

A minor has the same capacity as an adult to consent to medical treatment if the minor is married or is the parent of a child or, if in the judgment of the attending physician, the life or health of the minor would be affected adversely by delaying treatment to obtain consent.

A minor has the same capacity as an adult to consent to treatment for or advice about drug abuse, alcoholism, disease, pregnancy, contraception other than sterilization, physician examination or treatment of injuries from an alleged rape or sexual offense, or to obtain evidence of an alleged rape or sexual offense. A physician (or an individual under the direction of a physician) who treats a minor is not liable for civil damages or subject to any criminal or disciplinary penalty solely because the minor did not have the capacity to consent. Without the consent of (or over the express objection of) a minor the attending physician or, on advice or direction of the attending physician, a member of the medical staff of a hospital or public clinic may (but need not) give a parent, guardian, or custodian of the minor or the spouse of the parent information about treatment needed by the minor or provided to the minor, except information about abortion. (HG 20-103) See Abortion.

## Specialties

The following summarizes the Maryland statute on a physician representing to the public that the physician is a specialist:

Specialties. In an advertising statement, a physician may state the name of his or her specialty only if the specialty area is one recognized by the American Board of Medical Specialties. See also Physicians, Medical Specialties.

Section 14-704 of the Health Occupations Article provides:

(A) Identification by Board required. A physician may not represent to the public that the physician is a specialist in any field of specialized medical practice unless identified as a specialist in that field by the Board.

(B) Application and determination by the Board. If a physician requests, the Board shall determine whether the physician qualifies for Board identification as a specialist.

(C) Rules and regulations; qualifications.

(1) The Board shall adopt rules and regulations concerning application procedures, fees, and required qualifications for identification as a specialist.

(2) The qualifications required of applicants for Board identification as a specialist may include:

(i) The requirements established by the American Board of Medical Specialties, the Council of Medical Specialty Societies, and the Accreditation Council for Graduate Medical Education;

(ii) Education;

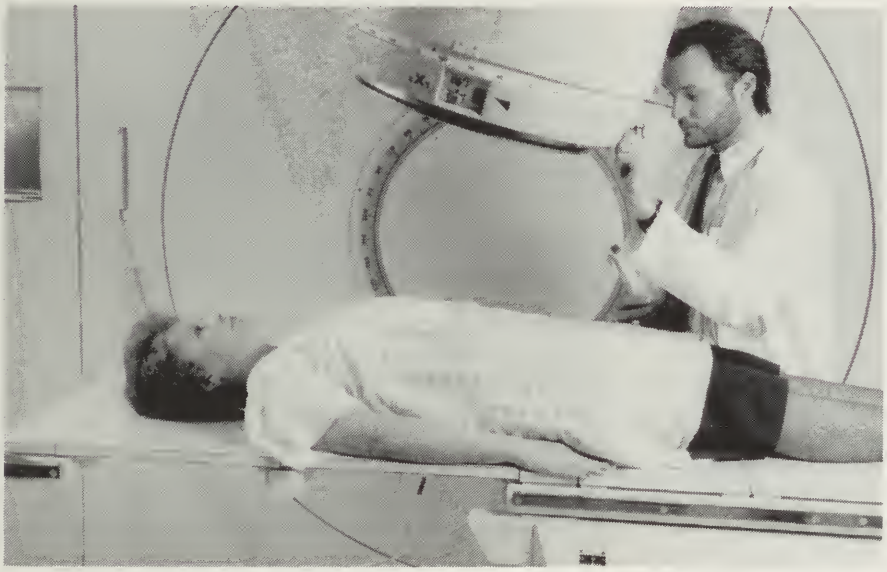
(iii) Professional experience; and

(iv) Whether, before July 1, 1984, the applicant represented to the public, in an ethical manner, that the applicant was a specialist.

(3) The Board may contract with the Faculty or any other nonprofit agency to process applications as a specialist.

(D) Approval of additional specialties. In approving additional specialties, the Board may consider those fields recognized and approved by the American Board of Medical Specialties, the Council of Medical Specialty Societies, and the Accreditation Council for Graduate Medical Education.

# Radiation Oncology Center Opens At St. Agnes



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The new Radiation Oncology Center is under the direction of Gary B. Stillwagon, Ph.D., M.D., Assistant Professor of Oncology, Radiology and Radiological Sciences at The Johns Hopkins Hospital. Dr. Stillwagon is Board Certified by the American Board of Radiology. He is assisted by Kam-Sing Lam, Ph.D., a physicist along with a dosimetrist from Johns Hopkins. The St. Agnes staff can treat 30 patients per day with a capability of a two-fold increase.

A complete array of brachytherapy procedures is available involving implanted radioisotopes. These include Iridium-192 for interstitial and intracavitary implantations in the head, neck and other regions; Cesium-137 for intracavitary implantations in gynecologic applications; and Iodine-125 for permanent implantations in many sites.

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# One Minute with Diabetes

*Doctor, I have not been coming to your office regularly about my diabetes, and my visit four days ago was the first in over a year. But I have had diabetes for 22 years, and I know something about taking care of myself. On my last visit you asked me to increase my insulin to 40 units Lente before breakfast and 20 units Lente before supper because my blood glucose reading was 504 mg/dl even though I had been taking 30 units Lente each day and was doing fairly well. I came in because I had vaginal itching and frequency of urination. Now my blood glucose in 170 mg/dl, but I have shortness of breath, swelling ankles, and blurred vision, which I did not have before. The frequency of urination is less, and the itching is better.*

*Why do I have these new problems?*

It is not unusual for a diabetic patient who has become acclimated to poor control, chronic hyperglycemia, and moderate dehydration to develop some fluid retention when control is improved. Blurred vision is due to the readjustment of fluid pressure within the eyes and will gradually improve. However, if the patient got a prescription for new lenses during the period of poor control, a new refraction probably will be necessary. The shortness of breath and ankle edema is due to "insulin edema." It will be short lived if diabetic control is maintained. A diuretic drug is not necessary unless the symptoms are severe.

The term "insulin edema" incorrectly suggests the problem is due to the administration of insulin. It is due to rapid improvement of poor control through decreased urinary excretion of sodium. It has been reported to occur with sulfonylurea therapy and even with strict dietary management alone.

Patients should be forwarned of these possible symtoms as well as the transient worsening of peripheral neuropathy if present, when improved control is sought after prolonged poor control of diabetes.

***DeWITT E. DeLAWTER* MD**
**Editor**


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# Today's Psychiatry

## Cues for Psychiatric Referrals


*NANCY T. NICHOLS MD*


A number of studies[1–3] indicate that 15 to 30 percent of patients seeking care from their primary care giver (PCP*) have a psychological component contributing to or responsible for their physical complaints. Yet only a small proportion of such patients are referred for psychiatric consultation and/or treatment.[2,4] With the exception of suicidal, overtly psychotic, or depressed patients, such referrals are not common. For many patients, early recognition of psychiatric components of their disease could hasten recovery. Failure to recognize psychopathology can prevent cure. Certain patterns of behavior can alert the PCP to suspect that psychological factors may be partially or entirely responsible for a patient's puzzling physical symptoms.

The following patterns often represent hidden conflicts and may be indications for referral for psychiatric consultation or treatment. They include a change in personality of a patient, particularly if associated with a change in the patient's life-style or family constellation; a significant increase in the number of visits to the PCP, often with vague complaints; physical symptoms that do not respond to appropriate treatment; and exhaustive and repeated negative diagnostic tests. Psychological factors should also be considered when a physician has reason to doubt the patient's compliance with instructions; no relief of symptoms has occurred from treatment by several previous physicians; a patient develops side effects from all medications prescribed; excessive or chronic need for analgesics, tranquilizers, or hypnotics is present or arises; there is reason to suspect alcoholism; or when an explicit psychosomatic illness exists. Finally, a family history that is positive for emotional illness or chronic physical complaints should alert the PCP to the possible presence of psychiatric factors, particularly if the symptoms are the same as those of a parent of the same sex.

There are many reasons why PCPs do not make psychiatric referrals. They may fear the patient will react negatively to such a referral. The physician may have a special long-term attachment to the patient, leading to a wish to cure the patient himself or herself. She may be pessimistic about the efficacy of psychotherapy or worried about the cost to the patient. Or he may have had poor feedback from previous psychiatric referrals. Finally, she may not suspect the existence of a psychiatric problem.[5]

It is easier for psychiatrists to recognize physical

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* PCP includes General Practitioners, Family Practitioners, and Internists.

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*Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor*

illness than it is for PCPs to recognize psychiatric symptoms. In the case of the former, the patient openly presents with or complains of concrete symptoms, whereas psychiatric symptoms, often considered by patients to be irrelevant to their physical symptoms, are not verbalized.[6]

Several studies have shown that patients are not as averse to psychiatric consultations as PCPs[7,8] may fear. A recent survey found that given a choice of treatment by their PCP alone, their PCP and a psychiatrist, or a psychiatrist alone, the majority of patients preferred treatment by a team.[9] A PCP's positive attitude toward psychiatric referral is crucial. If he indicates his belief in a relationship between the mind and the body, patients will not feel they have been rejected, are crazy, or that their doctor does not really believe in their distress. Explanation, in comprehensible terms, of the intensification of physical symptoms by stress and the action of stress on the autonomic nervous system usually is understood and accepted by patients. When a physician suspects that psychological factors may be involved in the patient's illness, early referral is indicated. Late referral, after lengthy, unsuccessful treatment, often leads to iatrogenic chronic physical symptoms resistant to psychotherapeutic intervention.[10]

Psychiatrists have an obligation to respond promptly to the referring physician, both orally and in writing. They should be scrupulous in consulting with the patient's PCP prior to initiating any treatment. If treatment is undertaken by the psychiatrist, he or she should provide on-going progress reports to the PCP, and keep apprised of the patient's physical status.

The absence of overt psychiatric symptoms in patients who have negative physical findings and/or do not respond to appropriate medical treatment does not rule out psychopathology. Certain patterns of behavior can alert the PCP to suspect that emotional factors are playing a role in the patient's physical complaints and to initiate a psychiatric consultation. Psychiatric treatment, if indicated, may uncover the source of the patient's symptoms, shorten the course of the illness, or be crucial to cure.

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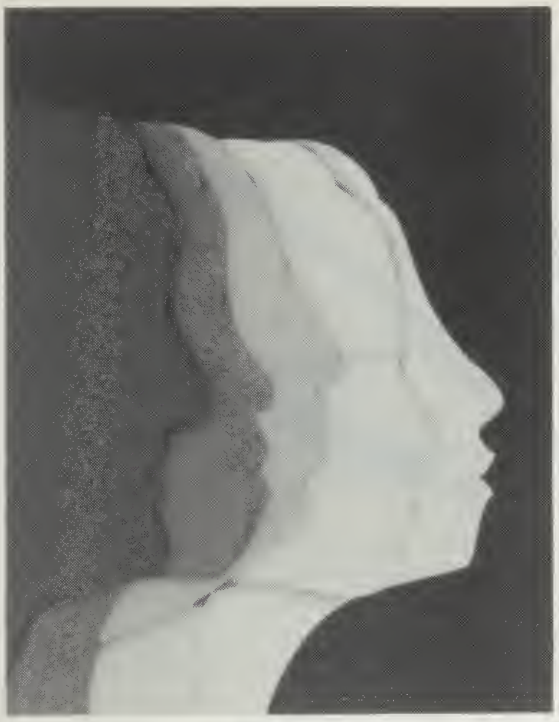
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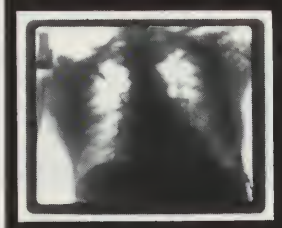
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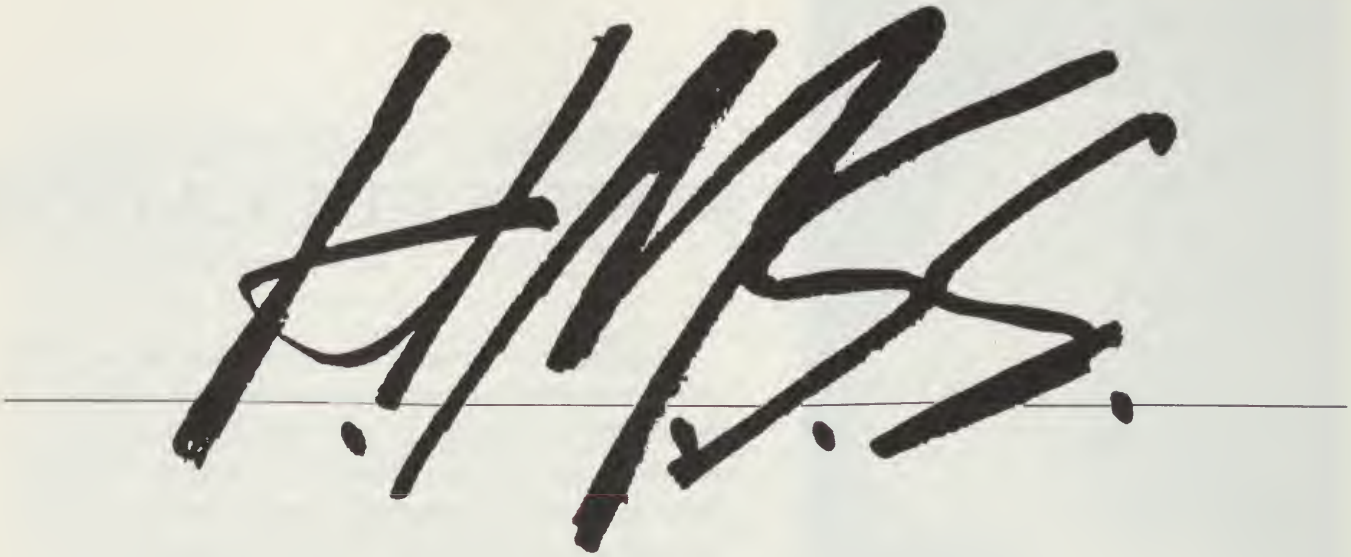
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# Members in the News

**Memorial Tribute**

## Franklin L. Angell MD, FACR
**1924–1988**

Whereas, Franklin L. Angell was a member of the Board of Directors and Past President, Maryland Radiological Society, when his untimely death occurred; and
Whereas, Dr. Angell gave vigorous, dedicated leadership to the practice of Radiology in Maryland and the nation;
Whereas, Dr. Angell was distinguished for his service in the American College of Radiology as Past President of the Council of the College, a member of the Board of Chancellors of the College and Chairman Designate of the Board of Chancellors to take office September, 1988; and
Whereas, Dr. Angell set an example of credibility, integrity, and efficiency, and gave of himself beyond limits in service of his patients, his colleagues, and for the benefit of his community and profession; and
Whereas, Dr. Angell's death will be a great loss to his family, to the medical profession, and the public; be it therefore
*Resolved.* That the Board of Directors and the membership of the Maryland Radiological Society adopt this resolution with an expression of deep sorrow on the death of Dr. Angell; and
*Resolved.* That this resolution be spread upon the minutes of the Maryland Radiological Society and a copy sent to his wife Mrs. Amy Angell and his children.

Respectfully submitted,
***LEE GOODMAN* MD, President**
**The Maryland Radiological Society**

**Ronald E. Cann** MD has been appointed chairman of the department of psychiatry at Fallston General Hospital. Dr. Cann received his medical degree from the University of Missouri Medical School. He completed his residency in the Department of Psychiatry at The Johns Hopkins Hospital and was a fellow in the Department of Psychiatry at The Johns Hopkins University School of Medicine, where he is currently an instructor.

• • •

**James P. G. Flynn** MD recently received the first Louis L. Goldstein Community Service Award at the Maryland Health Care Foundation Legislative Awards and Health Fair Ribbon Cutting Ceremony in the Calvert Room of the State House, Annapolis. Dr. Flynn was cited for his dedicated work, enthusiasm, and contributions to the advancement of comprehensive rehabilitation services. Dr. Flynn is Director/CEO, Montebello Rehabilitation Hospital, University of Maryland Medical System.

• • •

**A. H. Ghiladi** MD was installed as President of the Baltimore County Medical Association at its Annual Meeting. Dr. Ghiladi received his MD degree from the University of Shiraz, Iran, in 1965. After his internship at Bon Secours and Mercy Hospitals, he was a resident in medicine at Mercy Hospital. He served his fellowship in diseases of the chest at Maryland General and The Johns Hopkins Hospitals in 1971 and 1972. He entered private practice after completing his training.

Also taking office at the BCMA Annual Meeting were President-elect **Benjamin Del Carmen** MD, Vice-president **Esther Edery** MD, Secretary **Harold B. Bob** MD, and Treasurer **Louis C. Breschi** MD.

**We invite your comments as well as scientific articles. Write *Letters to the Editor* and *Commentary* *MMJ*, 1211 Cathedral St, Baltimore, MD 21201**

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# Carcinoma of the Pancreas and Periampullary Area, Part II

As mentioned before, carcinoma of the pancreas is the most common lesion in this area. It has been reported that 60 percent of the carcinomas of the pancreas are located in the head, 15 percent in the body, and about 5 percent in the tail. The remaining 20 percent seems to constitute the diffuse type. It is estimated that 90 percent of carcinomas of the pancreas are ductal type. Such tumors are fast growing and metastasize early. Diagnostic studies are utilized when the patient presents with symptoms of the disease, but by that time, it is already too late to cure the majority of those patients.

There is a real need for tumor markers for early detection and improving the prognosis. Tumor-associated antigens such as carcinoembryonic antigen (CEA), alphafetoprotein, and pancreatic oncofetal antigen in the sera lack specificity for such carcinomas. On the other hand, the availability of CT scanning, magnetic resonance imaging (MRI), percutaneous needle biopsy of the primary lesions as well as the metastases in the liver, and the availability of duodenoscopy with ERCP (endoscopic retrograde cannulation of pancreatic and biliary ducts) added significantly not only to the diagnosis of the patient but also reflected on the methods of management.

Ampullary lesions can be benign or malignant. The benign lesions include fibrosis, inflammatory polyps, adenomyomas, and leiomyomas. The malignant lesions can be primary adenocarcinomas, metastatic carcinomas from other primary sites, carcinoid tumors, or sarcomas.

## Prognosis

The prognosis of carcinoma of the pancreas is extremely poor when compared to other carcinomas of the periampullary area. Ductal carcinoma of the pancreas has an overall one-year survival of 12 percent, with an overall three-year survival of 2 percent. It seems that a younger age group does slightly better at least for the first two years after resection. Sex and race have very little bearing on survival. Certain data from the Charity Hospital, New Orleans, indicate better survival for those patients who underwent surgical resection of their pancreatic tumors of almost 15 percent at three years. However, the review of such data is retrospective, lacks accurate staging, and may include periampullary cancers, which carry a better prognosis.

Staging of pancreatic carcinoma by TNM system, reveals that patients with stage I carcinoma of the pancreas have a one-year survival of 35 percent and a two-year survival of 15 percent. On the other hand, stage II and III carcinomas have a one-year survival of 15 percent and a two-year survival of 4 percent. Stage IV disease has a one-year survival of 5 percent and a zero survival at 22 months.

Carcinoma of the ampulla of vater is considered to have a good prognosis. However, data from Japan reveal that the five-year survival of a large series of 450 patients was 16 percent, with a ten-year survival of 3 percent. The main cause of death was distant metastases. The two major prognostic factors are: (1) Patients with papillary type lesions have a better survival than those with ulcerative lesions. (2) Patients with metastases to the regional lymph nodes have one-half to one-third the survival rates compared to those who have no regional metastases at the time of diagnosis.

The five-year survival rates after resection for periampullary lesions range from 7 to 14 percent. The most important prognostic factor is the status of the regional lymph nodes. The median survival after resection was 57 months for those with no regional lymph node metastases, and 6 months with those with regional lymph node metastases.

Carcinoma of the lower bile duct carries a poor prognosis. In a resected group, the five-year survival was 5 percent, and the ten-year survival was 1 percent. However, occasional long survival is encountered in each series.

*Tumor Conferences are held weekly on Tuesday between 8 and 9 AM in Room N13E28 at the University of Maryland Hospital. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

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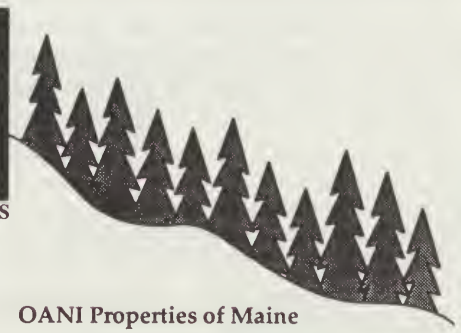
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## MHA Studies Quality of Care Delivered

What are the appropriate clinical yardsticks to enable hospital trustees to measure the quality of care being delivered to patients?

A three-year, $368,000 grant from the Robert Wood Johnson Foundation of Princeton, New Jersey to the Maryland Hospital Association will help fund a one-of-a-kind research project to find some of the answers.

In announcing award of the grant, Foundation President Layton E. Cluff MD said "Maryland hospitals and their association are breaking new and hard ground with their project. Hospital patients, trustees and managers across the country stand to benefit from successful development of reliable measures of quality. We think we've placed these funds and that challenge into the right hands."

Hospital Association President Richard J. Davidson said the grant, which began January 1, will support the expansion of a comprehensive data collection and analysis effort among more than 40 hospitals across the state. Information will be gathered and studied on 10 clinical "indicators," including mortality rates, Cesarean section rates, hospital-acquired infection rates, and rates of readmission after discharge. The aim is to first test them as valid indicators of the quality of care and second, as tools that hospital boards can use to oversee medical practice and the delivery of care.

Davidson said Maryland hospitals voluntarily began the project on a pilot basis more than 18 months ago under the state association's auspices. "When it became clear that this kind of research might be of value to all hospitals, not just those in Maryland, we decided to seek assistance from the Robert Wood Johnson Foundation. Their philosophy has centered on supporting programs that have a valuable and positive effect on patient care, more than research for academic sake."

Since its experimental phase began, MHA has agreed to participation by five multihospital systems in other parts of the country, giving the effort national scope. They are the Evangelical Hospital Corporation in Chicago, the Wisconsin-based Sisters of the Sorrowful Mother Ministry, the Sisters of Mercy Health System in Michigan, the Daughters of Charity National Health System (headquartered in Missouri), and the Adventist Health System (based in Kansas).

The use of clinical outcome data, such as mortality rates, by individuals and groups who accredit hospitals, regulate their activities, and pay for large amounts of care has risen sharply in recent years. Davidson noted that the federal government has been making hospital mortality data for Medicare patients public on an annual basis. Also, a growing amount of complex data is being collected and used to rate hospitals and guide consumers.

"It is imperative that the citizen volunteers who govern hospitals have valid screening measures if they are to serve one of their most important functions: ensuring that the right kinds of care are being given in the right ways."

In addition to collecting, analyzing, and disseminating comparative information to participating institutions, the research effort will provide technical assistance to hospitals on use of the data for internal quality assurance purposes. Educational programs for trustees, managers, and clinicians; help with improving data-collection systems; coordination of the research with various medical specialty groups; and the development of norms and standards against which a hospital can measure itself are all part of the project.

Davidson pointed out that the Johnson Foundation stipend supplements a $100,000 annual fund pledged by the Association's 65 member institutions last June. "Maryland hospitals were so convinced of the value of this line of study that they wanted it to begin, regardless of whether we were able to earn outside support."

The work will be supervised by MHA's Council for Quality Health Care, a permanent policy committee comprised of trustees, physicians, hospital and nurse executives, and others. Its Chairman is Eugene Feinblatt, a Baltimore attorney who has been Chairman of the Board of both Sinai Hospital and the MHA and current is a trustee of Union Memorial Hospital in Baltimore. The project director will be Steven J. Summer, MHA's Vice President for Professional Activities.

The Robert Wood Johnson Foundation became a national philanthropy in 1972. Since then, it has awarded some $800 million in grants to improve health care and health services in the United States. Over $36 million has been awarded to Maryland institutions in this period, including this most recent award to the Maryland Hospital Association.

The Maryland Hospital Association is a nonprofit, nongovernment organization. It was formed more than two decades ago as a vehicle for cooperation and communication among the state's 68 community acute care and special hospitals. Headquartered in Lutherville it is the only state hospital association in America with a governing body made up of hospital trustees.

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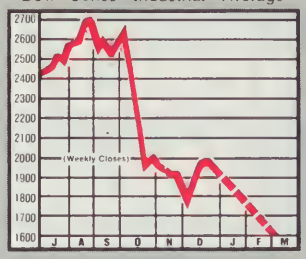
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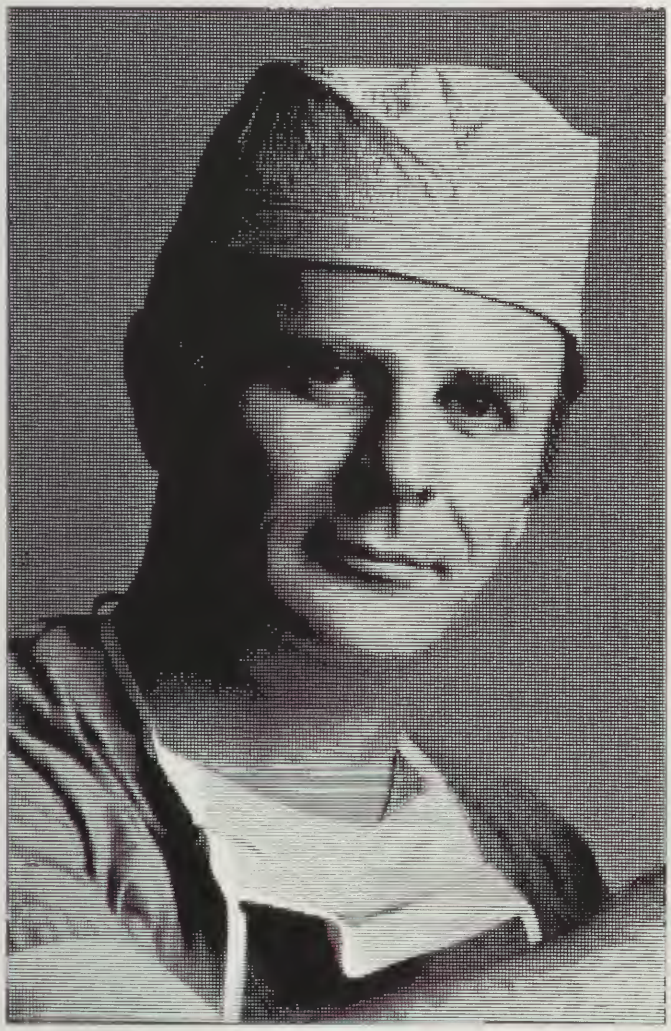
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Manuscripts may be sent to Editor *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by the editor, editorial board members, and guest reviewers. The final decision is reserved for the Editor.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with margins of at least one inch. Number pages consecutively. Please submit two additional copies.

Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the reviewing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to *Index Medicus*, volume number, first and last page numbers, and year of publication. For more extenisve information about preparing medical articles for publication, the editors suggest the International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Illustrations are material that cannot be set in type. Photographic material must be submitted as high-contrast, glossy prints. Drawings and graphs must be done professionally in india ink on high-grade white drawing paper. *Omit illustrations that do not increase understanding of text, and limit them to a reasonable number.* Four or fewer illustrations should be adequate for a manuscript of 4 to 5 typed pages. Legends are to be typed on a separate sheet of paper. Type on a gummed label and affix to the back of each illustration: figure number, title of manuscript, name of senior author, and arrow indicating top. Legends for illustrations should be typed on a separate page with numbers corresponding to those on the photographs and drawings. *Cost of printing color* photographs must be borne by the author.

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# Medical Advertising

*JOSEPH M. MILLER MD*

The State of Maryland, by a bill enacted on July 1, 1985, prohibited physicians from representing to the public that they are authorized to practice a medical specialty unless they have been identified as such by the State Board of Medical Examiners.[1] This law appeared under the aegis of that Board in practically the same language with the effective date of June 1, 1987.[2]

This representation comes under the classification of advertising, which has been severely frowned upon by the medical organization in the past. However, within the last ten years advertising has become accepted after having withstood legal challenge; but misrepresentation, consciously or unconsciously perpetrated, continues to be banned. Surely, the definition of a "specialist" is a worrisome problem and is the object of challenge and adjudication by the Legislature of Maryland.

The Supreme Court of the United States has held that prohibition of advertising by members of the medical profession is unconstitutional. Curiously, the issue was resolved by two decisions neither of which was concerned with medicine, although the judgment of the court subsequently was considered to be applicable to the conduct of all professional people.

## Pharmacists' Case

Initially, consumers of prescription drugs sued the Virginia State Board of Pharmacy seeking redress from its ruling that licensed pharmacists advertising the price of prescription drugs were acting in an unprofessional manner.[3] If the pharmacists were found guilty under such charge, a monetary fine or a revocation or suspension of the license might follow. A District Court rendered a decision against the Pharmacy Board by declaring that the statute was void and enjoined the Board from its enforcement. Later, the matter was carried to the Supreme Court, which upheld the previous decision by virtue of the fact that the First Amendment rights of the pharmacists were being violated by the act.

## Attorneys' Advertising

The succeeding term of the Supreme Court saw the second decision bearing upon medical advertising.[4] Again, a situation divorced from medicine arose in Arizona. Two licensed attorneys, Bates and O'Sheen, were charged with violation of the disciplinary law of the State Supreme Court that prohibited lawyers from advertising. The attorneys conceded they clearly had violated the ruling involved. At a hearing of the complaint before a local administrative committee, they recommended the attorneys be suspended for not less than six months. Further higher review maintained the verdict of guilt but reduced the time of suspension to one week. The appellants sought relief from the Supreme Court of Arizona and argued that their rights under the First Amendment had been infringed. The Court upheld the disciplinary rule but reduced the penalty to censure only. Upon appeal to the United States Supreme Court, censure was stayed until the Court could offer final determination on this matter.

The question seeking resolution was whether the Court could adhere to its protection of commercial speech in a more traditional profession as it did in the pharmacy case. The Court held that advertising fell within the rights of the attorneys as guaranteed by the First Amendment, and they were vindicated. A significant part of the opinion in *Bates and O'Sheen* was the rejection of the concept that advertising by attorneys was inherently misleading. Noteworthy is the fact that the Court did not deal with the quality of services that might be misleading enough to warrant restriction. The Court has thus provided a working presumption that the First Amendment will invalidate a total ban on advertising.

## AMA Changes Position

Subsequently and largely guided by this decision, the American Medical Association liberalized its rule tremendously.[5] Advertising is accepted but solicitation of patients is proscribed. The medical licensure regulations of over two-thirds of the states restrict or prohibit advertising and solicitation, however; and enforcement has been left largely to the state and local medical societies. Expulsion of a doctor from the society could follow conviction for advertising and this event, in turn, to loss of hospital privileges and an increased premium for malpractice insurance. Many state and local societies are not as liberal-minded as the AMA, and their reaction to advertising is yet to be seen.

Enforcement of ethical standards relating to advertising might be considered a private matter unaffected by constitutional appeal. The judgment for Bates and O'Sheen, however, has substantiated the right of free speech under the First Amendment, and the physician may advertise if he or she wishes to do so. Knowledge about name, type of practice, office location, office hours, and other such useful information, which will enable the consumer to make an informed choice of physician, is acceptable. Incorrect or misleading facts, and representation and implications likely to cause the average person to misunderstand or to be deceived are prohibited.

Dr. Miller is Acting Director of Medical Education, Liberty Medical Center, Inc., Baltimore.

Unquestionably, information useful to the consumer is ethical and legal. Demonstrated or potential harm to the user is another matter. The Court also pronounced that false or deceptive advertising may be prohibited.

The quality of the services advertised is the linchpin to any critical analysis. Self-laudatory statements such as being certified by a particular board or graduation from a prestigious medical school might seem as if they should be prohibited, but this information is precisely what the consumer wishes to know. If these statements are subject to verification, the quality analysis should be forgotten.

## Yellow Pages

One advertising method doctors use to reach the public is the Yellow Pages of the telephone directory. Correct information is acceptable, and the State of Maryland has acted in legal manner to see that this information is true. The questions might be asked, "Does a problem really exist, and are false statements being made?"

Physicians claiming specialty status in the telephone book fall into two groups. Some claim they "limit" their practice and perhaps infer that they are specialists in the true sense of the word. Other doctors are listed in the "Specialty Section," and although the Publishers of the Directory state this listing does not mean they are board-certified specialists in their areas of practice, the implication is plain that these individuals claim specialty status.

A review of advertising by doctors in this area did unearth a problem. The *Baltimore Metropolitan Yellow Pages* for 1986–1987[6] were compared with the *Directory of Medical Specialists* for 1985–1986.[7] These issues were the latest printed. If a difference existed, the error entailed must be quite small, because the Yellow Pages of 1987 reflect the results of 1986. The analysis was limited to the Baltimore Metropolitan Area and not the City, but, as such, the evaluation covers a great percentage of doctors in Maryland. Evidence of certification could not be found for 103 physicians who claimed specialty ratings. Of this group, 7 "limited their practice," 30 "limited their practice" and were also found in the "Specialty section," and 66 were found in that group alone.

If the consumer using this information expected that these doctors were certified by one of the existing boards, then the provided information was misleading. The Supreme Court and now the State of Maryland have prohibited misleading advertising.

## Questions Remain

Assuredly, some of these physicians had the proper amount of time in training in a specialized field but either did not take or were not successful in their examinations. Should such an individual be permitted to advertise in the same manner as a board-accredited doctor? The Peer Committee of the State Board of Medical Examiners will attempt to solve this sticky situation. The question to be resolved is "Can the State Medical Board accept such an individual as having credentials equivalent to those who have sat successfully for their examinations?" If the Board makes this exception, will two classes of certification be created? In such an instance, the regulatory power of the State Board may supercede that of the Specialty Board groups. The resolution of this difficult problem may yet get to a court of law as the system of state regulation triggers scrutiny under the First Amendment of the Constitution.

Perhaps a difference does exist between "board certification" and "specialist" as defined by the State. Contemporary physicians have been raised in an environment in which the term "specialist" has been accorded only to those doctors who were certified by board examination. There IS a difference between the trained individual who has never taken or has failed his boards and one who has been successful. How the State Medical Board will resolve this question for each appealing physician provokes a difficult problem, which now is also causing concern to the individual boards.[8]

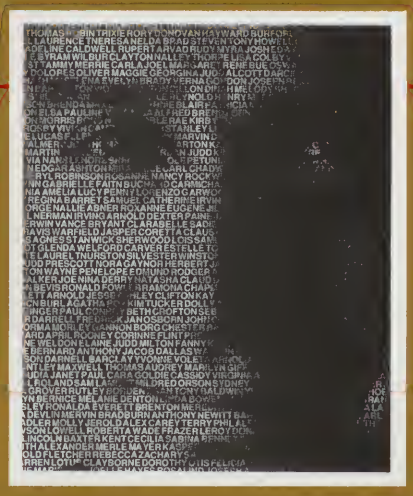
In retrospect, the physician does have the right under the First Amendment to advertise in an honest manner. The "specialist" who has not taken or has not passed the board examinations and the practitioner who is a specialist by virtue of long-term practice form two groups for whom the use of the term "specialist" must evoke serious thoughts about such accreditation by the State Board of Medical Examiners.

## References


1. Senate of Maryland, Senate Bill 885, 1985.
2. Title 10, Department of Health and Mental Hygiene, Subtitle 32, Board of Medical Examiners, 1987.
3. *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Council, Inc. et al.* 425 U.S. 748, 1817–1839.
4. *John R. Bates and Van O'Sheen v. State Bar of Arizona*, 433 U.S. 350, 2691–2720.
5. AMA Judicial Council. "Statement of the Judicial Council Re: Advertising and Solicitation." *JAMA* 235(1976):2328.
6. *Baltimore Metropolitan Yellow Pages*. Southwestern Bell Media, Inc., 1987, pp. 423–544.
7. *Directory of Medical Specialists*, ed. 22, 1985–1986. Chicago: Marquis Who's Who, Inc. 1985, p 4605.
8. Langsley, D.G. "Letter to the Editor." *New Engl J Med* 318(1988):117–18.

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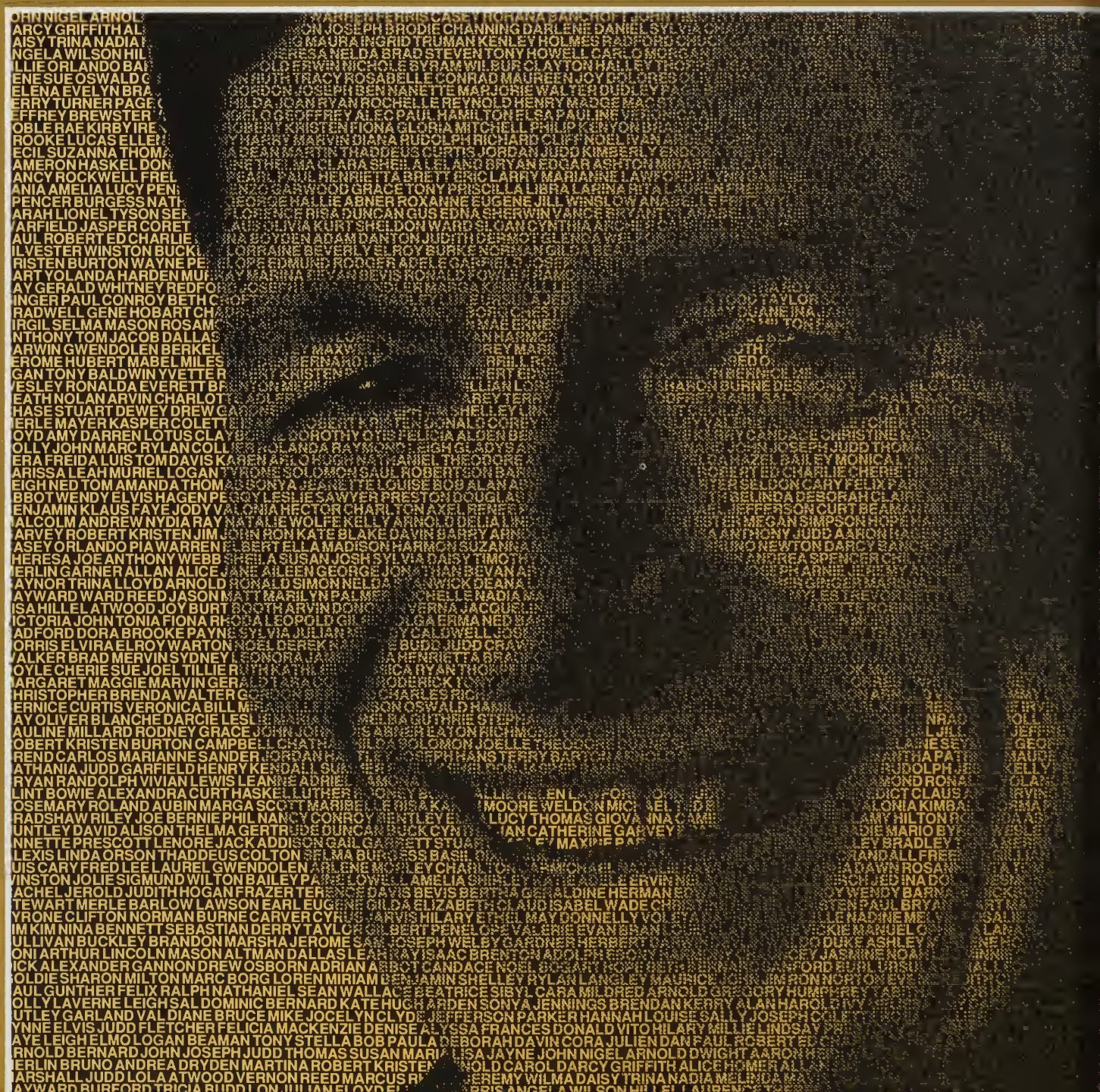
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LONG ACTING CAPSULES 60, 80, 120, 160 mg



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...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

## INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

## INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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(PROPRANOLOL HCl) LONG ACTING CAPSULES 60, 80, 120, 160 mg

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

**INDERAL® LA** brand of propranolol hydrochloride **(Long Acting Capsules)**

**DESCRIPTION.** INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

**CLINICAL PHARMACOLOGY.** INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

**INDICATIONS AND USAGE. Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

**Angina Pectoris Due to Coronary Atherosclerosis:** INDERAL LA is indicated for the long-term management of patients with angina pectoris.

**Migraine:** INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

**Hypertrophic Subaortic Stenosis:** INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

**CONTRAINDICATIONS.** INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

**WARNINGS.** CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

**Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)**—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing $T_4$ and reverse $T_3$, and decreasing $T_3$.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

**PRECAUTIONS.** GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

*Aluminum hydroxide gel* greatly reduces intestinal absorption of propranolol.

*Ethanol* slows the rate of absorption of propranolol.

*Phenytoin, phenobarbitone,* and *rifampin* accelerate propranolol clearance.

*Chlorpromazine,* when used concomitantly with propranolol, results in increased plasma levels of both drugs.

*Antipyrine* and *lidocaine* have reduced clearance when used concomitantly with propranolol.

*Thyroxine* may result in a lower than expected $T_3$ concentration when used concomitantly with propranolol.

*Cimetidine* decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

*Theophylline* clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS.** Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

*Cardiovascular:* Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

*Central Nervous System:* Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

*Gastrointestinal:* Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

*Allergic:* Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

*Respiratory:* Bronchospasm.

*Hematologic:* Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

*Auto-Immune:* In extremely rare instances, systemic lupus erythematosus has been reported.

*Miscellaneous:* Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

**DOSAGE AND ADMINISTRATION.** INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

**Reference:**
1. Data on file, Ayerst Laboratories.

D7295/188

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# Acute Pulmonary Histoplasmosis Outbreak Following Home Renovation

*CARL I. SCHOENBERGER MD, JAY H. WEINER MD, FRANK J. MAYO MD, JEANNE SPELLMAN MD, and ROBERT G. WALTERSDORFF PhD*

**In an outbreak of acute pulmonary histoplasmosis involving 13 workers, the source of infection appeared to be a wet ceiling in a bat-infested house in Rockville. Two workers who were removing the ceiling developed life-threatening acute histoplasmosis, and eleven others at the County Waste Transfer Station developed milder symptoms, presumably from exposure to the debris from the worksite. The acutely ill individuals eventually recovered following therapy with amphotericin B.**

*Histoplasma capsulatum*, a soil fungus widely distributed in the eastern and midwestern United States, is known to cause a variety of disease syndromes in humans including pulmonary infection, chronic cavitary lung disease, mediastinal fibrosis, and disseminated histoplasmosis. The great majority of infections with this organism are asymptomatic, and in endemic areas of the country, 80 to 90 percent of the population may manifest histoplasmin skin-test reactivity, even without antecedent clinical history of infection.

We recently encountered an outbreak of acute pulmonary histoplasmosis that was unusual in two respects: its occurrence in Rockville, Maryland, a nonendemic area of histoplasmosis, and the life-threatening nature of the illness in the two most severely affected patients.

## Case Reports

**Case 1** A 32-year-old male was admitted with a 7 to 10-day history of weakness, fatigue, and persistent fever. Two days prior to admission, he had noted shortness of breath and was seen in a walk-in clinic where a chest x-ray revealed bilateral pulmonary infiltrates. He was given erythromycin for presumed *Mycoplasma* pneumonia.

The following day, when the chest x-ray was reviewed by a radiologist, it was read as showing bilateral hilar adenopathy and miliary infiltrates, suggestive of tuberculosis or fungal pneumonia. The patient was contacted, but by this time he had presented to the Emergency Department with worsening dyspnea and cyanosis.

He was employed by a construction firm, and two weeks earlier had worked on tearing down a wet, damaged ceiling in a house undergoing renovation in Rockville. His co-worker on this job had similar symptoms and was at that time seeking medical attention in Martinsburg, West Virginia (see Case 2, below).

Initial evaluation showed the patient to be in marked distress with a temperature of 103 rectally, respiratory rate of 32, pulse of 120, and blood pressure of 130/80. Bilateral rales were heard in the chest, and there was mild cyanosis of the nails and lips. Chest x-ray showed bilateral miliary infiltrates with prominent hilar adenopathy (Figure 1). Blood gases on room air showed an acute respiratory alkalosis with a pH of 7.50, pCO2 of 31, and pO2 of 46. On 50 percent oxygen his pO2 rose to 90. Electrolytes, BUN, creatinine, and glucose were normal. White blood count was 11,500 with 8 percent atypical lymphocytes, and the hematocrit was 50. Liver functions were abnormal, and included an albumin of 2.8 grams percent, SGOT of 147 (normal 0–40), SGPT of 139 (normal 0–45), LDH of 357 (normal 30–225), and alkaline phosphatase of 233 (normal 20–140).

Fiberoptic bronchoscopy was performed on the day of admission with the finding of florid acute pneumonitis on transbronchial lung biopsy. No granulomas were seen, but organisms consistent with *H capsulatum* were demonstrated in lung tissue stained with GMS. Initial titers for *Histoplasma* were negative. Both lung tissue and bronchial washings eventually grew out *H capsulatum*.

The patient was begun on amphotericin B in increasing doses and over the next two weeks received a total dose of 600 mg. Fever and hypoxemia persisted for the first seven days of treatment, but he then began to



**Figure 1.** Initial chest x-ray of patient 1 showing prominent bilateral hilar lymphadenopathy and diffuse miliary infiltrates.

From the Departments of Medicine and Laboratories, Shady Grove Adventist Hospital, Rockville.



**Figure 2.** Followup chest x-ray of patient 1 showing substantial clearing of the adenopathy and infiltrates after treatment with amphotericin B.



**Figure 3.** Initial chest x-ray of patient 2. Again, hilar adenopathy and miliary infiltrates are noted.

improve both subjectively and objectively. Followup chest x-ray (Figure 2) showed substantial clearing of the infiltrates and adenopathy.

By the end of the second week of treatment, he developed a diffuse, morbilliform rash that was believed to be secondary to the amphotericin, which was stopped. The rash subsequently faded and resolved. Bone marrow aspirate, biopsy, and culture failed to show evidence of *Histoplasma* infection. Nevertheless, because of his initially abnormal liver function tests, it was thought that he might have dissemination of the organism, and he was placed on oral therapy with ketoconazole.

The patient was discharged on ketoconazole 400 mg a day, and pulmonary function tests done two months after discharge were completely normal, as was a repeat chest x-ray. *Histoplasma* (yeast phase) titer done two weeks after admission had become positive at 1:16 dilution and at six months was 1:128. The ketoconazole was continued for a total of six months. The patient has now returned to full activity.

**Case 2** A 19-year-old male co-worker of patient 1 was employed at the same worksite removing the damaged ceiling. He also developed fever, malaise, weakness, and dyspnea approximately 10 to 14 days following the dust exposure. He was admitted to the City Hospital in Martinsburg, WV, where radiographic findings were similar to those in Case 1 (Figure 3). Because of the epidemiologic evidence, his physician elected to treat him empirically with amphotericin B after telephone consultation with us about Case 1. He received a total dose of 500 mg of amphotericin and suffered only abdominal discomfort and pleuritic chest pain as possible side effects. Blood gases, physical findings, and chest x-ray improved, and he was discharged after three weeks of treatment, also on oral ketoconazole.

Readmission was required about three weeks later because of severe pleuritic pain and fever, which slowly resolved with conservative management. Followup pulmonary functions revealed mild to moderate restrictive impairment with a total lung capacity of 70 percent of predicted, and a diffusing capacity of 62 percent of predicted. He has not been able to resume his former construction job and continues to suffer from bouts of pleuritic pain.

**Additional Cases** The debris removed from the same house was loaded onto a flatbed truck and taken to the Montgomery County Solid Waste Disposal Facility before its infectious nature was known. Eleven workers at the disposal site developed mild respiratory symptoms, mostly consisting of low-grade fever and cough. Although elevated *Histoplasma* titers developed in seven of these workers, none required hospitalization

or antifungal therapy. An x-ray of one symptomatic patient is shown (Figure 4). *Histoplasma* could not be cultured from the house debris due to abundant overgrowth by other fungi. However, subsequent investigation by the Maryland Department of Health and Mental Hygiene showed that the house in question was well known by neighborhood children as a bat roost, and bat droppings appear to have been a likely source of the fungus in this outbreak.



**Figure 4.** Chest x-ray of patient with mild symptoms who was exposed to *Histoplasma* spores at the County Waste Transfer Station. There is a small infiltrate in the right lower lobe.

## Discussion

Despite the widespread nature of *H capsulatum* in the environment, symptomatic disease in humans in uncommon. Estimates are that fewer than 1 percent of infections produce symptoms, and most patients who seek medical attention do so because of chronic cavitary or disseminated histoplasmosis, rather than the acute pneumonic form.[1] Of the outbreaks reported in the literature[2,3] nearly all have involved point-source exposure and frequently have occurred at the "borders" of the endemic area for histoplasmosis, which contain many susceptible individuals who can develop acute *Histoplasma* pneumonia following a massive exposure.

This outbreak (January 1987) was typical in that the source of the fungal spores appears to have been bat droppings along with rotted wood. Both are well known as sources of large numbers of *Histoplasma* spores, as are blackbird roosts, rotting trees, and caves.

A similar outbreak occurred in November 1979.[4] Nineteen transportation workers were repairing a highway bridge in southern Maryland, a job that involved cleaning bat droppings off the concrete and steel superstructure of the bridge. Two individuals developed severe acute histoplasmosis, similar to that seen in our two cases, and nine others developed a milder febrile illness accompanied by a rise in *Histoplasma* titers. Acute illness also developed in three epidemiologists who investigated the outbreak.

Treatment of patients with acute pulmonary histoplasmosis remains controversial.[1] Most authors have recommended supportive care only, but a number of patients in the reported epidemics have received amphotericin B. The lack of controlled studies and the time course of the illness itself raise the possibility that the recovery of these patients may be fortuitous and not due to therapy with amphotericin. Nevertheless, it would seem reasonable to treat severely symptomatic and hypoxemic patients with antifungal therapy.

Data on the use of ketoconazole for histoplasmosis have been collected primarily in patients with disseminated disease. A recent trial conducted by the National Institutes of Health[5] showed an 84 percent success rate with ketoconazole for chronic cavitary histoplasmosis

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and a 57 percent success rate for patients with disseminated disease. There have been no randomized trials of ketoconazole in patients with acute pulmonary histoplasmosis.

Since the type of environments that can support the growth of *Histoplasma* spores are so common, it is difficult to anticipate when workers may be at risk for this form of acute massive exposure. Because of the infrequent danger of acute exposure to the spores, it does not appear practical or beneficial to advocate widespread serologic testing. Perhaps the best way to avoid the acute form of histoplasmosis would be for workers to use respirators similar to those used for asbestos removal when disturbing soil, trees, or structures that may contain large quantities of bat or blackbird droppings in known endemic areas.

Physicians should be aware of this syndrome, which usually will be encountered in an emergency room or primary care setting. Multiple cases are an important clue, if the patient is aware of co-workers who are ill. The presence of hilar adenopathy in a patient with pneumonia should raise the possibility of fungal or mycobacterial infection, and possible-exposure history should be elicited.

The prognosis of acute pulmonary histoplasmosis appears to be favorable, despite the severity of symptoms in some cases. Therapy with amphotericin B, while not of proved efficacy, seems reasonable to administer to severely ill patients.


**Acknowledgment**

The authors thank Dr. William Dressler for supplying the medical information concerning Case 2.


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# Implementation of DNR Orders in the Department of Medicine, The Johns Hopkins Hospital

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**Since a Do Not Resuscitate (DNR) policy, approved by the medical board at JHH in 1982, has not been used extensively by the medical staff, specific guidelines were developed to clarify and aid in its implementation. The guidelines, developed by a committee including nurses, a social worker-ethicist, a chaplain, and several physicians, were reviewed by the legal department. They clarify the process of deciding when a patient should not be resuscitated and draw a clear distinction between resuscitative efforts and other forms of continuing care.**

Implicit in the care of hospitalized patients is the understanding that, provided no orders exist to the contrary, they will be resuscitated (CPR) in the event of a cardiopulmonary arrest. The short-term success rate of resuscitation approximates 15 percent in the past ten years.[1-3] This low rate suggests either poor resuscitative techniques or inappropriate selection of patients for CPR. The latter is more likely, given the advanced state of CPR technology, the aging population, and the desire of contemporary society to have family members die in the hospital.

Although physicians oftentimes and for a variety of reasons are reluctant to discuss resuscitation with patients,[4] many patients express interest in the concept.[5] Failure of effective and timely communication likely results in misuses of CPR.

## Philosophy of Guidelines

It is possible to maintain vital processes long after the inexorable progression of disease would have terminated life. In this hospital, it is understood that should a patient suffer a sudden interruption of cardiac or respiratory function, every effort will be made to restore those vital functions. This standing but unwritten obligation for which all patients have given implied consent can be disregarded only when an expressed order to the contrary is written in the patient's medical record. The medical, ethical, and legal bases of such an order (commonly called a Do Not Resuscitate order) are well established and explicitly mandated by current administrative policy of The Johns Hopkins Hospital.

Because of differences in lines of authority, characteristics of patients, and spectra of disease among the functional units of the Hospital, implementation of the hospitalwide DNR policy has been made the responsibility of the individual departments. The guidelines in this document pertain to patients on the general medical wards (Osler Firms, 0-5, and Nelson-Baker Units), MICU, CCU, and future inpatient units of the Department of Medicine as well as address transfers of patients between units of the Department of Medicine, changes of attending physicians, and discharge and readmission to the hospital. The guidelines are based on the hospital's policy, which implies thorough, accurate, and timely communication.

Discussions with the patient and the family, and among the members of the health-care team should consider the overall clinical situation and prognosis. A DNR order may be appropriate in any of a wide variety of clinical situations and may be compatible with aggressive and intensive medical care. A cardiopulmonary arrest often is not a sudden or unexpected event, and the healthcare team should routinely consider how a given patient is most likely to deteriorate to a situation in which an arrest is imminent. Recognizing that the DNR order does not pertain to any treatment modalities that might be used to reverse or stabilize a deteriorating clinical situation short of arrest, the team should decide in advance what measures will be taken should deterioration begin. For example, if hypotension occurs, will vasopressors be used?

The purpose of these guidelines is to ensure that the DNR policy of The Johns Hopkins Hospital is implemented as sensitively, expeditiously, and consistently as possible within the Department of Medicine, and that all members of the health-care team are aware of their responsibilities.

## Definitions

- **Cardiopulmonary Arrest** refers to the cessation of sufficient cardiac function, respiratory function, or both to maintain life.
- **Cardiopulmonary Resuscitation** is the immediate, aggressive treatment of cardiopulmonary arrest and involves any or all of the modalities traditionally used in the event of cardiopulmonary arrest.
- **The Do Not Resuscitate Order** specifically instructs that no blow to the chest, compression of

From the Department of Medicine, The Johns Hopkins Medical Institutions, Baltimore.

the chest, cardiac massage, defibrillation, administration of cardiotonic or vasoactive drugs, or any form of artificial ventilation be undertaken should cardiopulmonary arrest occur.

Terms such as slow code,* chemical code, light blue code, and show code are sometimes used by physicians. Such jargon refers to activities that are philosophically contradictory to the overall intent of cardiopulmonary resuscitation as defined in the introductory statement. Written or unwritten orders intending these activities are therefore not recognized within the Department of Medicine.

### Indications for Considering a DNR Order

The overriding principle in consideration of a DNR order is that a decision be made early in the patient's course when the *patient* can participate in the decision. DNR orders may be considered, for example, when patients suffer from terminal illness or from disabling, severe, and irreversible illnesses; or when it becomes likely that a cardiac or respiratory arrest will occur. Other instances where a DNR order may be considered are when the patient requests it or when there is some reason to question the presumption of consent by the patient to CPR. When the patient has suffered an irreversible loss of consciousness or when circumstances suggest that resuscitation is uniformly ineffective, a DNR order is appropriate.

### Persons Involved in the Decision

When possible, the attending physician should discuss the DNR order with the patient when he or she is capable of making such a decision. Barring this, family members who are considered to represent the patient's best interest should be consulted to elicit their opinions regarding the patient's desires. Maryland law provides that when a patient is incapable of providing consent and has not given a durable power of attorney or signed a living will, a physician may accept informed consent from a spouse, an adult child, a parent, an adult sibling, a grandparent, or an adult grandchild. Discussion also should involve the primary care nurse and the house officer who spend the most time with the patient.

The patient may wish to formalize the decision in the event that he or she later lacks the capacity to make decisions. These advanced directives may take the form of a living will or a durable power of attorney (see Appendix).

When it is the attending physician's judgment that no medical benefit** would derive from resuscitating the patient, the physician may write the DNR order without soliciting the opinion of the patient or the surrogate. Courtesy requires that the physician inform the patient or the surrogate of the DNR and its rationale.

### Informed Consent

When discussing resuscitation with the patient or surrogate, the physician should follow the general guidelines for informed consent, which require that the risks and benefits and reasonable options be explained in understandable terms and that the patient realize that he or she has a choice free from coercion.

In the case of DNR, the specific content of discussion should include the medical evidence leading to consideration of the DNR order, a brief discussion of how resuscitation is performed, and the expected outcomes (both benefits and risks) should resuscitation be performed or be withheld. Reassurance should be given that a DNR order will not affect the type or intensity of subsequent care.

### Documentation of DNR Order

The attending physician must document in the progress notes the indication for the DNR discussion and rationale for the decision. The attending must state that the patient or surrogate understands the significance of the DNR order and agrees with its implementation. In the event that the attending physician cannot be in attendance when the decision is made, the authority to write a DNR order may be delegated to another physician. However, the attending physician must, as soon as possible, countersign both the progress notes documenting the decision and the order. It is recommended that acknowledgment of the DNR order be made at each nursing shift change as long as the order stands.

### Continuing Care Orders

A clear distinction must be made between do not resuscitate orders and the continued care of the patient. A DNR order is compatible, on occasion, with even the most aggressive level of care. Furthermore, approximately 20 percent of patients with the DNR order leave

* A "code" is a synonym for resuscitation.

** No medical benefit is defined narrowly in this instance to mean physiologic benefit. Therefore, a patient in whom resuscitation would lead to no likelihood of survival, would not benefit medically from resuscitation. If the physician's estimate is that post arrest the patient would survive, but at a lesser quality of life, then the physician should involve the patient or surrogate in the decision.

the hospital alive. Therefore, the following areas of patient care (with examples) should be addressed whenever a DNR order is written.

1. Comfort measures (should pain medications be changed?)
2. Vital signs (should the frequency of vital signs be changed?)
3. Nutrition (will a feeding tube be placed?)
4. Fluids (will fluids be given if refused?)
5. Medications (will antibiotics be given in the event of infection or pressors in the event of hypotension?)
6. Blood products (will blood products be given in the event of hemorrhage?)
7. Continuing biomedical support (will dialysis be instituted or continued?)
8. Religious aspects (should a member of the clergy be contacted concerning religious support?)
9. Disposition of the patient (if discharged, will the patient go to a hospice or home?)
10. Family education (if the patient is discharged, will family members be supported by a visiting nurse and telephone links made to the primary physician in order to prepare the family for the events leading up to death outside the hospital?)

## Resolving Conflict

Conflicts over DNR orders sometimes occur among physicians, nurses, and other care givers or among family members. It is the responsibility of the attending physician to assure that such conflicts are resolved. Under Maryland law, the physician, other care givers, or the family may consult The Johns Hopkins Hospital Patient Care Advisory Committee (Ethics Committee). On rare occasions, for example, during a dispute among family members regarding the guardianship of an incompetent patient the Legal Department may need to be contacted. When appropriate, the Chairman of the Department of Medicine should be made aware of such conflicts.

## Review of DNR Orders

DNR orders should be reviewed on a daily basis and anytime there is a significant improvement in the patient's condition. Any member of the health-care team can request such a review, but it is recommended that routine review occur on daily rounds. If the patient or the surrogate questions the appropriateness of a previously written DNR order, the attending physician should rescind the order, and steps should be taken to resolve the issue. In the event of an intradepartmental transfer of a patient who has a DNR order, the order will stand upon transfer unless specifically rescinded by the new attending physician.

## Relationship of DNR Orders to Future Care

On discharge of the patient from the Hospital, the DNR order must be noted in the written final progress note or discharge summary and/or transfer note. It is also recommended that the attending physician communicate the DNR order decision to the primary care physician. The DNR order should be considered as part of the discharge planning process. It is important that the family be asked their concerns when taking the patient with a DNR order home. It is recommended that the attending physician educate the patient's family and/or care givers to prepare for a cardiac arrest so as to prevent the patient from unnecessarily returning to the hospital and undergoing an inappropriate resuscitation.

When transfer from Johns Hopkins to either a nursing home or hospice is under consideration, the social workers must be involved early in the discharge planning to determine whether unique requirements of the accepting institution are compatible with the level of care determined in the hospital, for example, some nursing homes will not accept a patient without a means of feeding.

Patients discharged with a DNR order from the Department of Medicine who are subsequently re-admitted should have their status reassessed at the time of admission.

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### Appendix

### Substituted Decision Making

There are several ways in which a DNR decision can be carried out legally in the absence of capacity of the patient to make such decisions. The first two methods require the patient's signed consent while the patient is competent to make such decisions.

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2. **Living Will:** A legal document signed by the patient authorizing the patient's attending physician to write orders in the chart concerning life-sustaining treatment in accordance with the patient's desires.

3. **Maryland Disabled Adult Statute:** This law states that in the absence of one of the above documents, a relative may give substituted consent for medical care of a disabled adult. The priority list of relatives is

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# Lyme Disease: Epidemiological Characteristics in Maryland, 1984–1986

*REBECCA M. THAMBIDURAI MD, JACK K. GRIGOR DVM, JOSEPH T. HORMAN DVM, and EBENEZER ISRAEL MD*

**Although Lyme disease in not officially reportable in Maryland, reporting cases on the standard morbidity cards is encouraged. Prior to 1984 incomplete reports of about 18 cases were made to the Maryland State Department of Health and Mental Hygiene, the earliest in 1979. Forty-five cases were reported between 1984 and 1986, most occurring during the summer months in individuals under age 40. Three times more males than females were affected. Beside nonspecific manifestation, symptoms included skin rash, arthritis, neurological symptoms, and cardiac symptoms.**

Lyme disease is a complex multisystem disease caused by a spirochete, *Borrelia burgdorferi*,[1–5] transmitted to humans by the bite of the Ixodes tick.[1,2,6] The primary reservoir of the tick is the white-tailed deer for the adult form and the white-footed mouse for the immature form. It was first described as a disease complex in 1977 near Lyme, Connecticut, by Allen Steere *et al.*[7,8] Clinically, the disease usually begins with a characteristic skin lesion, erythema chronicum migrans (ECM),[9] which is red, annular, and expanding with a clear center. This may be followed by cardiac, neurological, or arthritic complications weeks to months later. We describe the epidemiology of Lyme disease in Maryland from 1984 to 1986.

## Methods

During the three years from January 1, 1984 to December 31, 1986, 45 cases of Lyme disease were reported in residents of Maryland; 10 in 1984, 20 in 1985, and 15 in 1986. All reports received from physicians, hospitals and the Maryland State Health Department Laboratory were investigated. For this study we defined a case as any person reported by a physician to have Lyme disease with onset of symptoms during the study period and who had at least one of the disease manifestations consistent with the clinical spectrum of the disease, with a significant history of a tick exposure or a positive serological titer to the Lyme disease antigen. A positive titer was defined as a 1 in 256 (IFA) or greater (the CDC criteria for a serological positive), or a fourfold increase in titer between the acute and convalescent sera. Details of reported cases were collected on a form that elicited information on demographics, symptoms associated with the disease, serology, tick exposure, and relevant travel history and treatment.

From the Maryland State Department of Health and Mental Hygiene. Dr. Thambidurai is Epidemiologist, Center for Veterinary Medicine; Dr. Grigor is Maryland Public Health Veterinarian; Dr. Horman is Assistant Director, AIDS Administration; and Dr. Israel is Director, Epidemiology and Disease Control.

## Results: Descriptive Epidemiology

**Age, Sex, and Race** Two thirds of all the patients were under 40 years old, and persons under 20 comprised almost 50 percent of the total (Figure 1). The median age was 15.5 years (range of 2 to 77 years), and in each age group more males than females were affected. There was a total of 11 females and 34 males affected; the male to female ratio was 3:1. Of the 45 cases there were 35 whites and 3 blacks; 7 persons did not have their race reported.

**Month of Onset** Most patients reported an onset of symptoms in the summer months of June, July, August, and September (60 percent), with lowest occurrences in winter and early spring (Figure 2). Eleven patients had their onset in July, the maximum for any one month.

**Geographic Distribution** Twelve of the 23 counties and Baltimore city reported cases of Lyme disease from 1984 to 1986 (Figure 3). The maximum number of cases were from Cecil and Queen Anne's counties (6 cases each). Attack rates ranged from 20.48 per 100,000 in

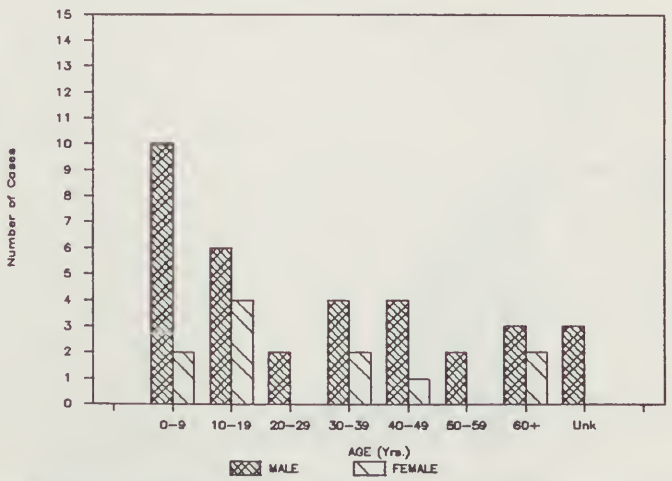



**Figure 1.** Reported cases of Lyme disease by age and sex in Maryland, 1984–1986.

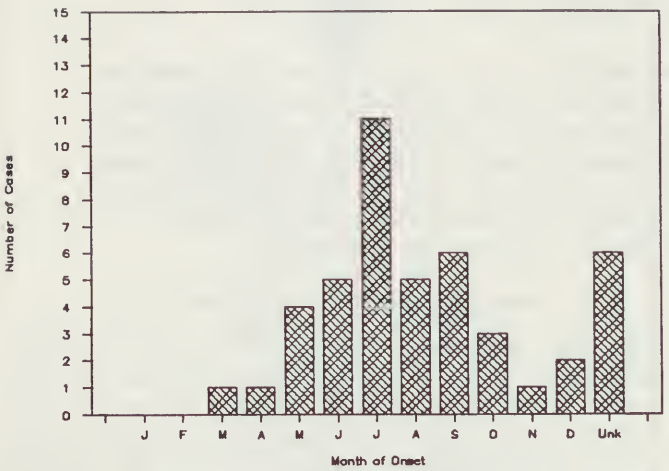



**Figure 2.** Reported cases of Lyme disease by month of onset in Maryland, 1984–1986.

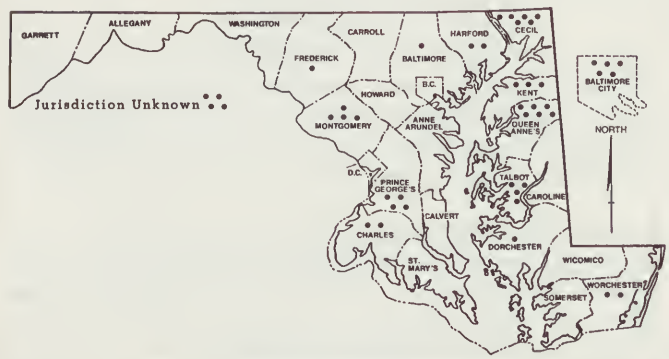



**Figure 3.** Cases of Lyme disease reported by health jurisdictions of Maryland, 1984–1986.

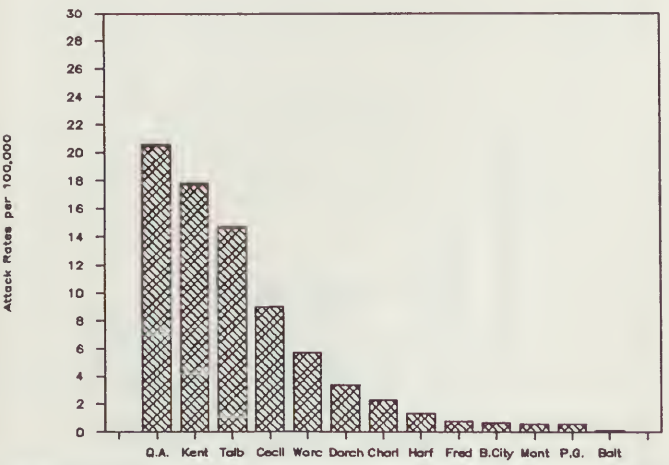



**Figure 4.** Attack rates for Lyme disease for Baltimore city and counties of Maryland, 1984–1986.

Queen Anne's county and 17.75 in Kent county to 0.59 in Prince George's and 0.15 in Baltimore counties (Figure 4).

**Tick Exposure** Only 18 patients (40 percent) recalled a definite tick bite. An additional 4 patients (9 percent) recalled being exposed to ticks but could not remember a specific bite.

**Symptoms** Generalized symptoms of malaise, fever, myalgia, or headache were reported in a majority of the patients (Figure 5); 32 (71 percent) reported one or more of these. ECM was present in 29 patients (65 percent). In those persons who had a tick bite, the ECM occurred 3 to 30 days after the bite. ECM was often the presenting symptom or occurred 3 to 19 days after the onset of other generalized symptoms. The number of ECM lesions ranged from 1 to 15 and the size of individual lesions varied from 1.5 to 17 cms.

**Complications** Arthritic symptoms were the most frequent complication (Figure 5) reported by 25 patients (55 percent). The knee was the most common joint affected (64 percent), followed by the ankle (32 percent), elbow (16 percent), hip (12 percent), shoulder (8 percent), metatarsals (8 percent), phalanges (8 percent), and wrist (4 percent). Arthritis was frequently the presenting symptom; it also occurred 2 days to 8 months after the onset of ECM or other generalized symptoms.

Neurological symptoms were reported in 7 patients (16 percent). Of these, 5 (71 percent) reported meningitis, 5 (71 percent) reported encephalitis, and 5 (71 percent) reported facial palsy. There was one case re-

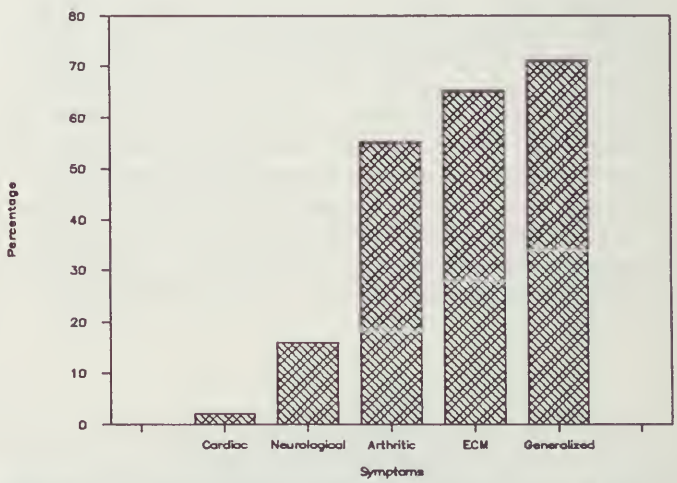



**Figure 5.** Symptoms of Lyme disease in cases reported in Maryland, 1984–1986.

ported of optic neuritis and 3 cases of peripheral neuropathy. These symptoms occurred over a range of 3 days to 2 weeks after onset of the disease. Only one patient (2 percent) was diagnosed to have cardiac involvement on the basis of an abnormal EKG.

**Treatment** Thirty-two patients (71 percent) received some form of antibiotic treatment. Twenty-four of these (54 percent) had received penicillin, and 5 (12 percent) had received tetracycline. Most antibiotics were given orally for 7 to 10 days. Patients with neurological symptoms were usually treated with high dose intravenous penicillin. Nineteen patients (44 percent) had been hospitalized, and there were no reported fatalities. There was no long-term follow-up of these patients.

**Serology** A positive serology was defined as a 1:256 or greater titer (IFA) or a fourfold increase in titer between the acute and convalescent serum samples. One or more serum samples were tested in 33 patients (73 percent); of these, 28 patients (62 percent) were positive.

## Discussion

Although other studies generally indicate a more equal distribution, epidemiological characteristics of these cases of Lyme disease in Maryland from 1984 to 1986 demonstrated a male to female ratio of 3:1. The age group with the most cases was 0 to 9 followed by the 10 to 19 age group; these two groups accounted for almost half the cases, probably because persons in these age groups are more involved in outdoor activities and hence have a greater exposure to ticks; they also are less likely to be conscious of tick attachments or to facilitate their speedy removal.

Most patients had an onset of illness in the summer months, July being the most common. This follows the generally observed pattern and probably is due to the more ubiquitous presence of the tick in these months, the greater degree of outdoor activity, and hence the greater likelihood of coming in contact with the ticks.

Distribution of the disease in Maryland generally is localized to the counties of the upper eastern shore and the populous parts of the state. Whether this indicates a higher prevalence of the infected tick, a greater number of ticks, a greater population of the reservoir the white-tailed deer, a greater awareness of the disease, or better reporting from these areas is uncertain. Although Baltimore city reported five cases, three of these patients were exposed to the vector while out of state as was one case residing in Montgomery county.

A majority of the cases reported ECM (65 percent). One study has reported ECM in 75 percent of their patients.[10] Arthritis was by far the most common complication and was reported in over 50 percent of the cases. This is consistent with the clinical spectrum of the disease. Although only 62 percent were serologically positive, it is important to realize that treatment with antibiotics may abort the development of positive antibody titers. Therefore the diagnosis frequently may be clinical rather than serological, and studies based solely on positive serologies are apt to underestimate the incidence.

It is likely that increased numbers of cases will be reported in the coming years. To what extent this increase is indicative of an increase in the incidence, increased recognition, or increased reporting of the disease is not clear. The Centers for Disease Control and the Maryland State Department of Health and Mental Hygiene encourage reporting of the disease to local and state health authorities so that geographical and temporal trends may be better identified. Maryland is one of the many states in the northeastern United States that are endemic for Lyme disease. Other foci of infection are in the southwest (California and Texas) and in the midwest states of Minnesota and Wisconsin.

**Reporting of cases of Lyme disease on the standard morbidity cards is encouraged.**

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# Rehabilitation and AIDS: Primary Care and System Support

*P.A. FURTH MD, M. MALOOF MS, J.P.G. FLYNN MD, and F. SHEA MD*

**As the numbers of persons diagnosed with Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) rise, the need for structuring rehabilitation programs for these people becomes clear. The Center for Disease Control in Atlanta, Georgia estimates that between 1 and 1.5 million persons in the United States currently are infected.[1] Some infected individuals have been admitted to rehabilitation hospitals. It is important to plan now for the increased numbers who will be admitted in the future. Rehabilitation programs need to develop management plans for the different manifestations of the disease as well as to implement infection control guidelines addressing issues unique to the rehabilitation setting.**

Over 36,000 Americans had died of AIDS by June 1, 1987.[2] These numbers will continue to increase unless this epidemic can be controlled. It has been estimated that by 1991 between 250,000 and 300,000 Americans will have AIDS, and an even greater number will be infected with HIV.

Persons infected with HIV may be asymptomatic, manifest relatively few symptoms from the infection, or express the full Acquired Immune Deficiency Syndrome. As the majority of persons with the infection are asymptomatic and may not even know they carry the virus, most patients seen in rehabilitation hospitals with this infection will be admitted for other reasons. Many individuals in rehabilitation programs are victims of trauma. Some of these patients will have risk factors for HIV infection, such as drug abuse. Others will be admitted for disabilities from an unrelated illness but may have become infected with HIV through sexual contact, sharing intravenous needles, or transfusion. Children infected perinatally are another population that may require rehabilitation. In summary, HIV infection is an important potential comorbidity in the rehabilitation setting, and its incidence will be increasing.

The second group of HIV-infected patients admitted to rehabilitation hospitals are those who require therapy for neurological illnesses associated with the virus. These illnesses may be divided into two broad categories: those related to the virus itself and those resulting from an opportunistic infection. Guillain-Barré syndrome, transverse myelitis, stroke, and neuritis may be caused by HIV; and many of these patients can improve with rehabilitation. Other conditions associated with the virus may be less responsive to therapy, for example, dementia (which affects 30 to 60 percent of patients with AIDS) and progressive multifocal leukoencephalopathy, an opportunistic viral infection. Other opportunistic infections such as toxoplasmosis of *Mycobacterium tuberculosis* can cause brain abscesses that may respond to antimicrobial therapy.

The authors are at Montebello Rehabilitation Hospital, University of Maryland Medical System. Dr. Furth is with the Division of Infectious Diseases, Department of Medicine; Maloof and Dr. Flynn are with the Department of Epidemiology and Preventive Medicine; and Dr. Shea is with the Division of Rehabilitation, Department of Neurology; all within the University of Maryland School of Medicine.

Presented at Annual Assembly, American Academy of Physical Medicine and Rehabilitation, and Annual Session, American Congress of Rehabilitation Medicine, October 1987.

## Worthwhile Improvement

Rehabilitation can assist the patient in regaining lost function. For instance, a 66-year-old woman was diagnosed with transfusion-acquired HIV infection and AIDS after presenting with *Pneumocystic carinii* pneumonia. Four weeks after recovery from her pneumonia she presented with fever, decreased mentation, headache, and a left hemiparesis. A CAT scan showed multiple ring enhancing lesions. Toxoplasmosis encephalitis was diagnosed, and she was treated with sulfadiazine and pyrimethamine. Although initially bedridden due to the left hemiparesis, the patient was able to return to full ambulation after four weeks of antibiotics and physical therapy.

It is important to recognize that while AIDS has been universally fatal to date, many patients can live normal lives for months to years after their diagnosis. Such patients should be approached with a positive attitude and offered a rehabilitation program that accommodates their individual prognosis. AIDS patients with potentially reversible deficits should be offered a rehabilitation plan that encourages them to remain ambulatory and live their life as fully as possible.

Even patients with less favorable prognoses, such as those with dementia or progressive multifocal leukoencephalopathy (PML), may benefit from limited intervention such as gait training or memory aids. Patients with disabilities who are asymptomatically infected should be offered the same rehabilitation program as those without infection: they may live for years to decades following their initial infection and deserve to live at their maximum potential.[3]

While many aspects of rehabilitation programs designed for AIDS patients are the same as for patients without HIV infection, these programs must accommodate two features that distinguish HIV-infected pa-

tients: the intense psychosocial and educational needs these patients have and the necessity of following guidelines to prevent transmission of the disease.

## Individual Needs

The psychosocial and educational needs stem from the fact that these patients simultaneously are adjusting to several life changes as well as needing to understand a disease that frequently appears in newspaper headlines as new research findings and health care policies are announced. AIDS patients must recognize that they have a fatal disease. Asymptomatically infected persons face the possibility of developing AIDS in the years to come.

Patients who developed the infection from sexual contact or intravenous drug use may feel guilty about how they acquired the infection. These patients may be isolated from their families who cannot accept the patient's life-style or who are afraid of the disease. Many patients will experience discrimination at work or in the community and will need strong support and counseling on several different levels. They have to accept a fatal disease, a disability, and, frequently, isolation from family and community.

The patient and his or her family must be educated about HIV and the means of its transmission. Information about the infectivity of blood and body fluids should be discussed while presenting infection control guidelines for the home. The lack of evidence for transmission through casual contact should be emphasized. Sexual partners of the patient also will require education and counseling. They should be advised that the risk of transmission to a regular sexual partner is approximately 50 percent.[4] Information on how to be tested for HIV infection and counseling on "safer sex" practices should be offered.[5]

Every health care worker needs to be familiar with basic information about HIV infection, and rehabilitation hospitals as well as other health care settings need to ensure that trained personnel are available to educate and counsel patients.

## Institutional Needs

In addition to answering the needs of individual patients and their families, rehabilitation hospitals must follow institutional infection control guidelines. Existing infection control guidelines (prepared primarily for the acute care hospital) suggest that all blood and body fluids from all patients be considered potentially infectious (Universal Precautions).[5]

Guidelines must be adapted to an environment in which patients attend multiple therapy settings and where sharing equipment and group participation is frequently necessary.

Since occupational transmission has been limited to blood contact and there is no evidence for transmission through casual contact,[7] it is both reasonable and prudent to suggest that these patients be managed with blood and body fluid precautions alone. The implementation of these guidelines depends on whether the patient has control of body secretions or has open wounds.

In those who have control of their body secretions and no open wounds, barrier techniques only need be employed if the patient is being phlebotomized or there is direct contact with a body fluid (for example, urine, saliva, semen, diarrheal stool). This type of patient could attend most therapy sessions without special precautions.

Patients' open wounds should be completely covered to prevent leakage. If this can be done, no further precautions are necessary except when the dressing is changed.

Patients lacking control of their body secretions or with large open wounds require additional precautions. When contact with body fluids is likely, staff members should wear gloves and gowns. If aerosols will be generated, particularly blood aerosols, a mask and protective eyewear should be added.

Most patients admitted to rehabilitation hospitals will be recovering from acute illness or trauma and will have some control of body secretions. Therefore, most rehabilitation hospitals will be able to "mainstream" those patients with HIV infection. Generally, patients whose condition requires use of more barrier can be offered a rehabilitation program in their rooms or with a limited amount of easily cleaned equipment.

The virus is susceptible to a wide variety of cleaning agents used in hospitals, for instance, phenols, formalin, alcohols, sodium hypochlorite, and gluteraldehyde. As a patient continues to recover and requires less precautions, he or she can be included in the standard rehabilitation program.

Similarly, as individual rehabilitation programs are designed, precautions necessary for each patient in each therapy session can be developed with the help of an Infection Control Nurse and/or a Hospital Epidemiologist. As each rehabilitation specialty gains experience in treating HIV-infected patients, they will become increasingly comfortable and familiar with the necessary precautions.

## Integration into Community

An important component of any rehabilitation program is the reintegration of the person into the family and community after discharge. HIV infection has an

obvious impact on this. Printed materials should be given to the patient on discharge to emphasize the need for following precautions for blood and body fluid exposure, including "safer sex" and testing of sexual partners.

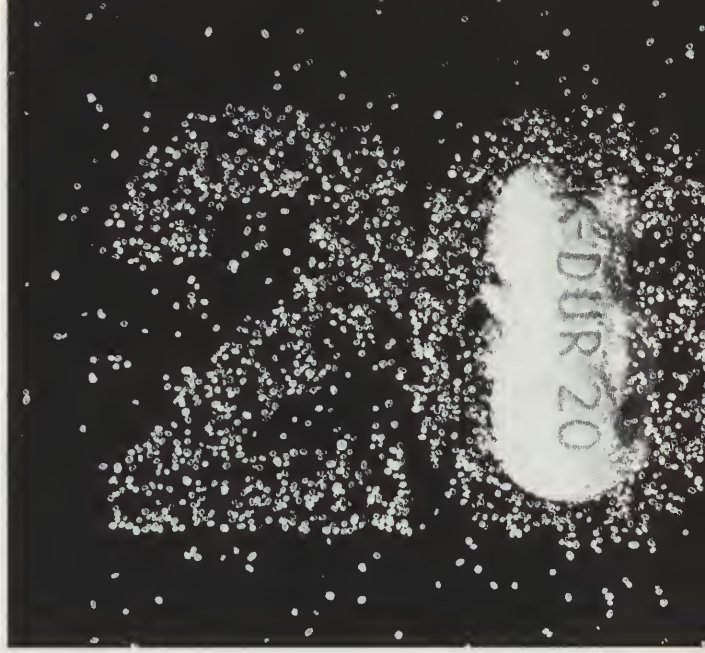
The patient should be advised that he or she will need to inform health care providers who will contact blood or body fluids of the HIV infection. The lack of transmission through casual contact can be reemphasized. However, many people with HIV infection find that some family members or friends will no longer come in contact with them. Discharge from a rehabilitation program can be a "re-isolating" experience for these patients. Postdischarge counseling will help a patient through this adjustment period. Referral should be made to institutions or community groups offering support groups and follow-up medical care for HIV infection.

## Summary

Rehabilitation hospitals in American will admit increased numbers of patients with HIV infection in the future, primarily as a comorbidity. A proportion of patients with AIDS who can benefit from rehabilitation therapy will be seen, and a majority of these can be managed within standard models of rehabilitation. Infection-control guidelines can be adapted to the individual patient and program. Education and counseling of the patient should begin in the rehabilitation hospital and should be continued after discharge. Rehabilitation hospitals will be delivering both primary care and system support to the individual and the health care delivery network.

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**CONTRAINOICATIONS:** Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

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**WARNINGS: Hyperkalemia**—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

**Interaction with Potassium Sparing Diuretics**—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

**Gastrointestinal Lesions**—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

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**Metabolic Acidosis**—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

**PRECAUTIONS:** The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

**Laboratory Tests:** Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

**Drug Interactions:** Potassium-sparing diuretics; see **WARNINGS.**

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Long-term carcinogenicity studies in animals have not been performed.

**Pregnancy Category C:** Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

**Nursing Mothers:** The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS:** One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINOICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

**OVERDOSAGE:** The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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*Laboratory Tests*—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

*Drug Interactions*—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

*Carcinogenesis, Mutagenesis, Impairment of Fertility*—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

*Pregnancy—Teratogenic Effects—Pregnancy Category C*—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

*Nursing Mothers*—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

*Pediatric Use*—Safety and effectiveness in children have not been established.

*Use in Elderly Patients*—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

*Hepatic*—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

*Cardiovascular*—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

*Endocrine*—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

*Hematologic*—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another $H_2$-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

*Integumental*—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

*Other*—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

**Overdosage:** There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous $LD_{50}$ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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PLANDEX 35201

# The Perils of Bluefish: Handle with Care!

*W. ROBERT LANGE MD*

**Bluefish (*Pomatomus saltatrix*), a popular summer catch of Maryland fishermen, are endowed with sharp teeth and an acrimonious disposition. Serious bite wounds are a potential danger to anglers, most incidents occurring during the careless handling of boated quarry. Injuries produced by bluefish run a high likelihood of becoming infected; however, the principal risk associated with bluefish is scombroid poisioning, a foodborne illness related to the consumption of improperly handled fish. Symptoms resemble an allergic reaction, and antihistamines and cimetidine appear to be effective treatment moieties. Prevention consists of timely and adequate refrigeration of bluefish before consumption.**

The bluefish is a popular summer catch along the entire eastern seaboard. With Maryland's moratorium on striped bass (rockfish) angling, blues have become even more popular and sought after by Maryland's saltwater sportsmen. Variously called chopper, snapper blue, and even marine piranha, the voracious bluefish has garnered quite a reputation. Endowed with a mouthful of extremely sharp teeth along with a pugnacious reputation for readily using them, schools of bluefish commonly swim through large shoals of baitfish slashing and destroying everything in their path, including smaller individuals of their own kind. Bluefish are pursued by anglers of all ages, often with apparent impunity; nevertheless, there are certain health-associated risks with this endeavor, and they go beyond the obvious ones of physical injury.

## Trauma

When in a feeding frenzy, migrating bluefish have been known to suddenly overwhelm the waters off public beaches.[1] Although attacks on swimmers are thought to be a rare occurrence and unintentional, ravenous blues will bite at anything, and a swimmer unlucky enough to be in the water at the time could receive a series of bite wounds and easily lose a finger or toe. Nevertheless, the vast majority of bites occur out of the water, generally during the boating and unhooking of captured prey.

Not all injuries are bites, and both puncture wounds and lacerations can be sustained while handling or attempting to handle a freshly caught bluefish fluttering on the line or flapping about on deck. Both fishhooks and fins can be responsible. Carelessness, often in conjunction with excessive alcohol consumption on the part of the angler, is a common denominator.

## Infection

Bites, abrasions, and puncture wounds sustained within or in close proximity to the marine environment often involve violation of the integument and subsequent wound contamination through indigenous fish-borne flora, seawater, and/or inadequate care. Therefore, meticulous attention to basic wound management is necessary to minimize posttraumatic infection. Injuries sustained from careless handling of bluefish should be managed with prompt treatment (including debridement of devitalized tissue, removal of any foreign bodies, changing dressings regularly) and avoidance of reexposure to seawater while the injury heals.[2] If the patient is overdue for a tetanus booster, as is the case with the majority of adults,[3] this inoculation should be administered. Adult patients should be provided with the combination tetanus/diphtheria toxoid (Td), 0.5 ml.

Because of the diverse variety of bacterial organisms present in the marine environment, many of which have unique growth characteristics, in the setting of wound infection or sepsis, the clinical laboratory should be alerted that a marine-acquired organism may be present. Some marine bacteria may require saline-supplemented media and incubation at 25° C instead of the standard 35–37° C.[4] Management of marine-acquired infections should include therapy against *Vibrio* species, and third-generation cephalosporins have been recommended due to the broad nature of the coverage they provide.[5]

Although some authorities advocate prophylactic antibiotics as a part of the initial management of marine-acquired infections, such as in the case of serious injury or a patient with impaired defense mechanisms,[5] others



**Bluefish, from the International Game Fish Association (IGFA).**

Dr. Lange is with the Johns Hopkins Medical Institutions, Baltimore.

recommend that the use of systemic antibiotics be guided by culture and sensitivity tests.[6]

## Food Poisoning

The greater hazard with bluefish lies not with their biting humans, but rather with the potential problems when the "tide" is turned and man bites fish. It recently has become evident that bluefish can be an important vehicle in the etiology of scombroid poisoning,[7–9] a foodborne illness associated with the consumption of improperly handled dark-meated fish. The condition is distinct from ciguatera,[10] the other major toxicity associated with eating saltwater fish, in that the responsible toxin is not contracted from the marine environment. Rather, it is produced directly within the fish meat as a result of bacterial action and decomposition.

The name scombroid is derived from *Scombridae* (mackerel-like), the family of marine fishes that includes tuna, albacore, mackerel, and bonito. However, scombroid poisoning often is associated with fish not belonging to this family. For example, an epidemic occurred during early 1986 in Alabama and Tennessee involving the nonscombroid species amberjack,[11] and of 73 outbreaks reported to the CDC during the five-year period 1978 to 1982, 42 percent implicated mahi-mahi (dolphin fish) as the vehicle.[12]

## Clinical Features

Symptoms typically begin within 30 minutes of the consumption of affected fish,[13] although wide individual variations can occur.[14] Resembling a classic histamine reaction, complaints typically include facial flushing and sweating, a burning sensation of the mouth and throat, diarrhea, dizziness, nausea, abdominal cramps, palpatations, and headache.[15] Erythema, urticara, and itching are common, and in severe cases, tachycardia, blurred vision, bronchospasm, and respiratory distress may develop.[14] Blistering of the mouth, swelling of the tongue, and conjunctival injection have been reported.[9,16] The median duration of symptoms is four hours,[13] although on rare occasion they may persist for a day or two.

Although the symptoms of scombroid poisoning resemble an acute allergic reaction, the syndrome is a toxic phenomenon; a response to exogenous histamine and associated mediators rather than a reaction to mast cell degranulation. Patients who are told scombroid poisoning is a food allergy are being given inaccurate information, and if they are told to refrain from eating fish in the future, they are being done a disservice.

## Pathophysiology

The amino acid histidine is a normal and abundant muscle constituent of dark-meated fish.[17] When such fish are improperly refrigerated, or if cooling is delayed, enteric and surface microorganisms convert histidine to histamine and possibly other biogenic amines such as saurine. Temperatures between 20° and 30° C favor rapid bacterial growth.[17] The pathophysiology of scombroid is complex and involves more than histamine ingestion. For one thing, histamine is not toxic when taken orally, even in high doses,[7] and in all likelihood other mediators, toxins, or potentiators are involved in the pathogenesis of the condition.[7,17]

## Diagnosis and Treatment

The diagnosis of scombroid poisoning generally is made on clinical grounds. A careful history and knowledge of the condition are sufficient; nevertheless, poisoning can be confirmed by the demonstration of a high histamine level (greater than 100 mg/100 g of tissue) in the associated fish. Levels greater than 20 mg/100 g are suggestive of decomposition, and those greater than 50 mg/100 g are considered a danger to health and potentially toxic.[17] The Food and Drug Administration has established 50 mg/100 g as the hazard level for tuna; however, no federal action levels have been set for other species, including bluefish.[9] Fresh fish normally contain less than 1 mg% of histamine.

Antihistamines have been reported to shorten the course of the illness,[7–9] but the benefit is not always consistent. Cimetidine, a histamine-$H_2$-receptor antagonist, has been reported to be efficacous;[18] however, the drug has been tested only intravenously, and there are no reports of the potential utility or benefit of the oral formulation.

In an emergency setting with a seriously ill patient in whom a comprehensive history might need to be deferred until after initial clinical management and in which anaphylaxis or angioneurotic edema might be a serious possibility, aggressive emergency care is obviously warranted. If sufficient history is available to make scombroid poisoning a part of the differential diagnosis, parenteral cimetidine (Tagamet for injection, 300 mg/2 ml or Tagamet for infusion, 300 mg/50 ml) could be administered according to the package insert instructions. If the injection formulation is used, the 2 ml should be diluted in 18–20 ml of 0.9 % sodium chloride for injection and infused over a period of not less than 2 minutes.

In a less urgent setting where more history is available and when oral therapy would be appropriate, initial management with antihistamines would be the standard of care. Diphenhydramine (Benadryl) 25–50 mg every 6–8 hours would be indicated. If no discernible benefit is appreciated within an hour of treatment, if antihistamines should be contraindicated, or if cimetidine therapy should be employed from the start, Taga-

met tablets 300 mg 4–5 times a day can be prescribed. In most cases, therapy would need to be prescribed only for a day or two, three at most.

Patients on isoniazid (INH) for tuberculosis are at enhanced risk of scombroid poisoning.[19,20] Generally, histamine is rapidly metabolized in the body by a number of enzymes, including the diamine oxidase, histaminase. Isoniazid is a potent inhibitor of diamine oxidase; consequently, following a histamine challenge, a considerable portion of the substance may remain unmetabolized and absorbed. Therefore, the clinical index of suspicion should be higher in patients on this treatment medication.

## Prevention

Once decomposition in the fish has progressed, prevention becomes difficult. Bacterial contamination is not easy to quantify, and its measurement is not recommended as either a prevention strategy or a diagnostic tool. Even though scombroid is the result of decomposition, affected fish do not have a characteristic or noticeable odor, and their physical appearance may be unremarkable. Affected fish have been reported to have a sharp or peppery taste,[7] but this is an unreliable sign that is neither sensitive nor specific. Consequently, many affected fish will have a normal taste, texture, and aroma.[9] To complicate matters further, many cooks will overly spice dark-meated fish, giving it a peppery undertaste to mask the characteristic "fishy" flavor. The toxins in affected fish are heat stable and are not inactivated by either freezing or cooking. No available method of preparation (including salting, drying, marinating, or smoking) will render contaminated fish toxin free.[15]

Effective prevention is tailored to the safe and appropriate handling and storage of fish. Recommendations include avoiding unnecessary gaffing of fish and minimizing the handling of fish destined for consumption.[8] Also, during handling and cleaning, it has been suggested that fish meat not be rinsed in seawater since many of the microorganisms capable of metabolizing histidine are customarily found in this medium.[8] The most important step, however, is the immediate, appropriate, and continued refrigeration of fish after capture. The best defense against scombroid is the prompt storage of freshly caught fish at 0° C (32° F) or below.[21]

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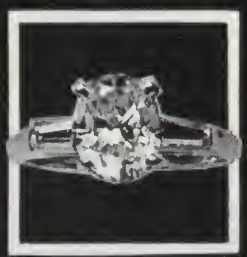


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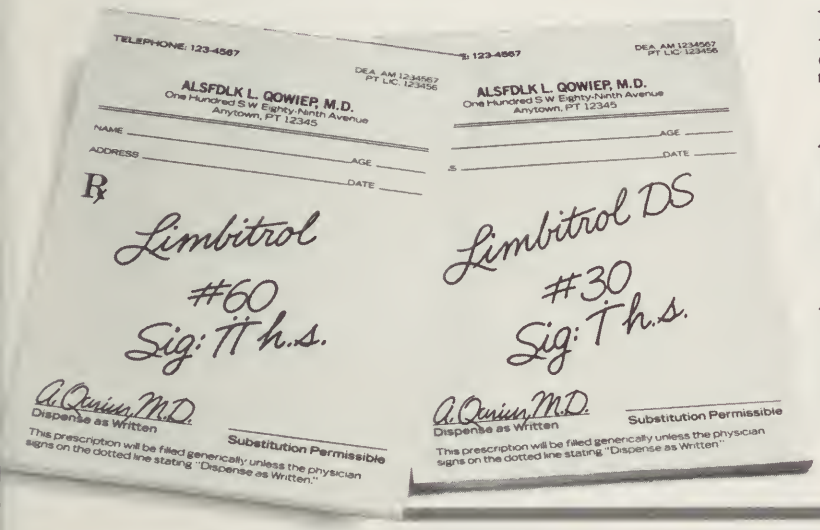
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**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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**Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:*** **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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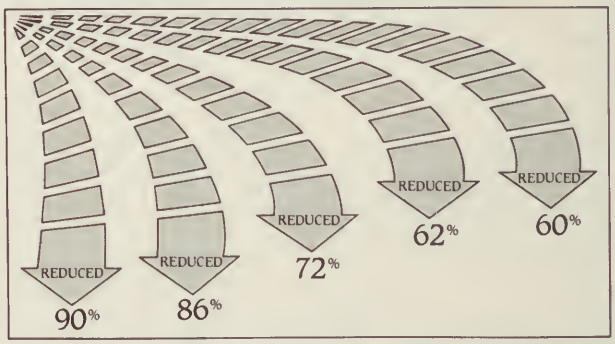
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- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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*Patients often presented with more than one somatic symptom.

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# MMJ

July 1988

# Maryland Medical Journal

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# ATTENDING AT MIRACLES

He was present at your birth, may even have delivered your parents. He brought his comforting manner to the hospital, making his patients feel as at home in that strange environment as in their own houses. At normal deliveries he felt himself an attendant at a miracle, just someone there to help things along, to comfort and encourage.

But your children's children are being delivered into a different world. Babies still cry out the wonder of their own births, but rarely to a doctor who remembers their mother's first moments. More babies are surviving their first hours now than every before. Still, it is clear that, for many babies who might not have survived in another era, a long, healthy life is not yet guaranteed.

Using sophisticated tools for fetal monitoring, obstetricians can track an infant's condition at most stages of its journey into life. Such tools, designed to aid the doctor in the delivery room, sometimes foster the myth that every delivery should be easy, every baby perfect -- that birth is no longer a miracle, but an event ruled by science.

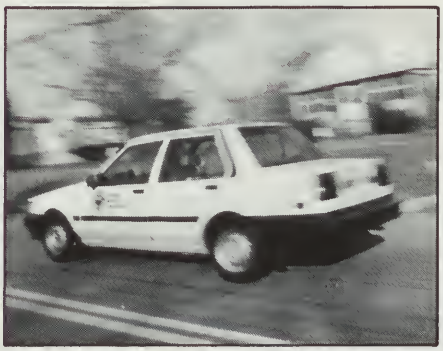
Increasing patient expectations and a breakdown of the doctor-patient relationship add to the risk of malpractice claims against obstetricians. It is not uncommon to hear of OB/GYN specialists forced to abandon obstetrical practice altoghether, leaving their patients to travel farther from home to have their babies.

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MMJ

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*Cover:* Architects' rendering of R Adams Cowley Shock Trauma Center; Reid and Stuhldreher, PC/Jacob J. Gzech Associates, a joint venture.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

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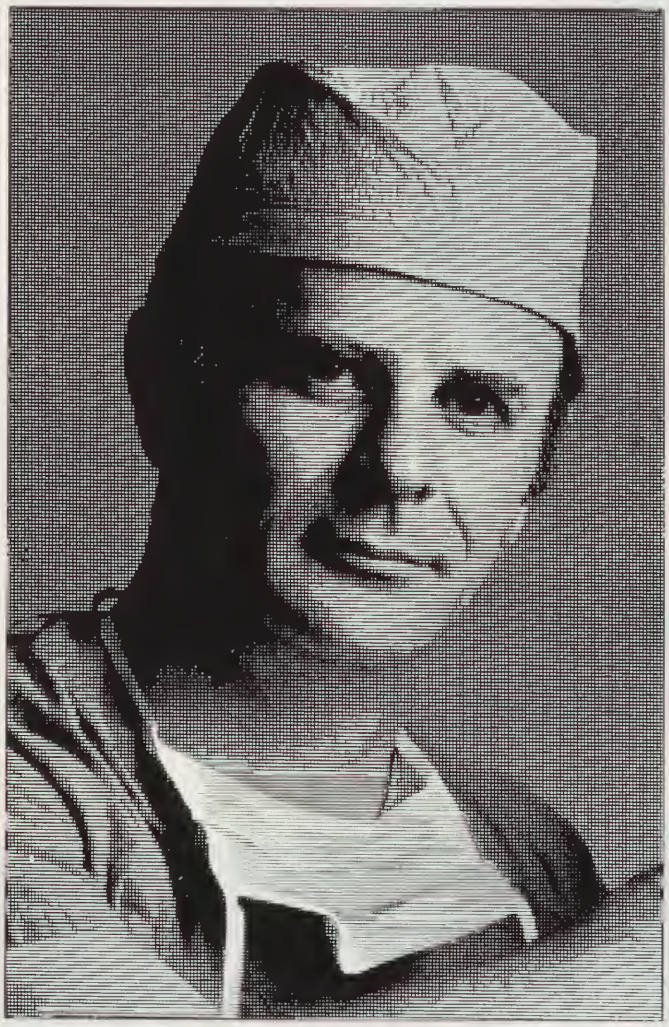
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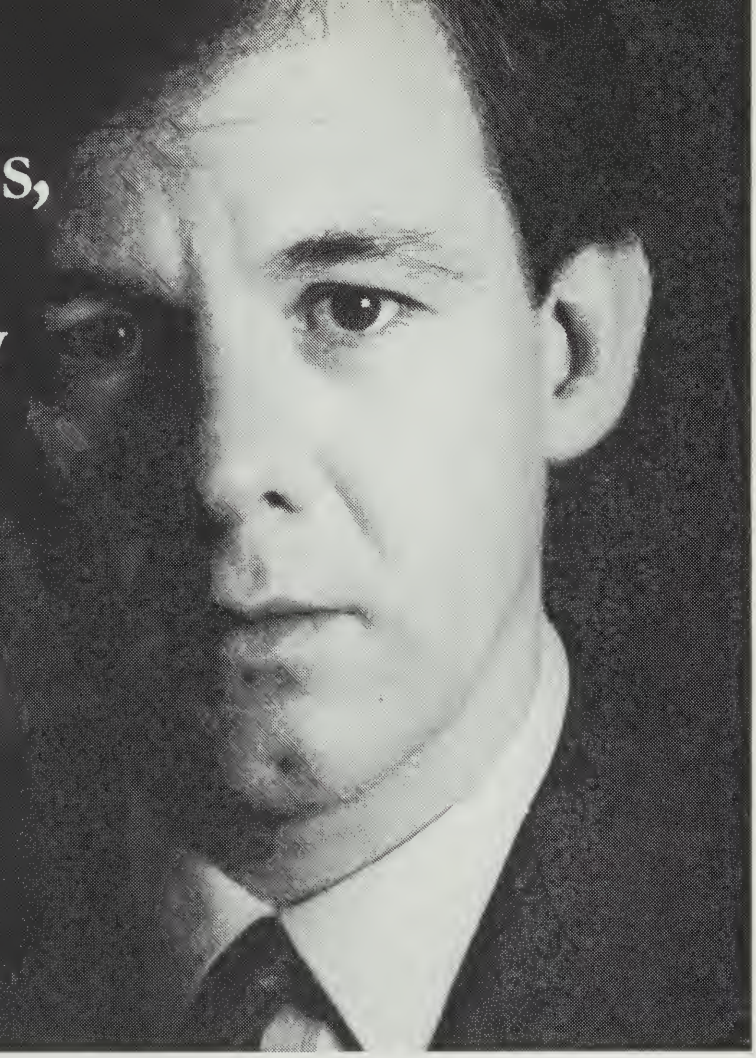
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It means "dependability" in almost any language

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Capsule or tablet slow-release potassium chloride preparations should be reserved for patients who cannot tolerate, refuse to take, or have compliance problems with liquid or effervescent potassium preparations because of reports of intestinal and gastric ulceration and bleeding with slow-release KCl preparations.

Before prescribing, please consult Brief Prescribing Information on next page.

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For patients who can't or won't tolerate liquid KCl.

*The most common adverse reactions to potassium salts are gastrointestinal side effects.

†Pooled mean serum potassium following oral administration of 30 mEq K-Tab compared to 24 mEq Slow-K in diuretic-treated hypertensives (n = 20) over 8 weeks.

C I B A

**References: 1.** Data on file, CIBA Pharmaceutical Company. **2.** Skoutakis VA, Acchiardo SR, Wojciechowski NJ, et al: Liquid and solid potassium chloride: Bioavailability and safety. *Pharmacotherapy* 1980;4(6):392-397. **3.** Skoutakis VA, Carter CA, Acchiardo SR: Therapeutic assessment of Slow-K and K-Tab potassium chloride formulations in hypertensive patients treated with thiazide diuretics. *Drug Intell Clin Pharm* 1987;21:436-440.

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*BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE INSERT)*

**INDICATIONS AND USAGE**
**BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.**
1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis; in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For prevention of potassium depletion when the dietary intake of potassium is inadequate in the following conditions: patients receiving digitalis and diuretics for congestive heart failure; hepatic cirrhosis with ascites; states of aldosterone excess with normal renal function; potassium-losing nephropathy; and certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

**CONTRAINDICATIONS**
Potassium supplements are contraindicated in patients with hyperkalemia, since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene) (see DVERDDSAGE).

All solid dosage forms of potassium supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation. Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to an enlarged left atrium.

**WARNINGS**
**Hyperkalemia** (See OVERDOSAGE).
In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic.

The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

**Interaction With Potassium-Sparing Diuretics**
Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g , spironolactone or triamterene), since the simultaneous administration of these agents can produce severe hyperkalemia.

**Gastrointestinal Lesions**
Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage, or perforation. Slow-K is a wax-matrix tablet formulated to provide a controlled rate of release of potassium chloride and thus to minimize the possibility of a high local concentration of potassium ion near the bowel wall. While the reported frequency of small-bowel lesions is much less with wax-matrix tablets (less than one per 100,000 patient-years) than with enteric-coated potassium chloride tablets (40-50 per 100,000 patient-years) cases associated with wax-matrix tablets have been reported both in foreign countries and in the United States. In addition, perhaps because the wax-matrix preparations are not enteric-coated and release potassium in the stomach, there have been reports of upper gastrointestinal bleeding associated with these products. The total number of gastrointestinal lesions remains approximately one per 100,000 patient-years. Slow-K should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

**Metabolic Acidosis**
Hypokalemia in patients with metabolic *acidosis* should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, or potassium acetate.

**PRECAUTIONS**
**General:**
The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis *per* se can produce hypokalemia in the absence of a deficit in total body potassium, while acute acidosis *per* se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium.

**Information for Patients**
Physicians should consider reminding the patient of the following:
To take each dose without crushing, chewing, or sucking the tablets.
To take this medicine only as directed. This is especially important if the patient is also taking both diuretics and digitalis preparations.
To check with the physician if there is trouble swallowing tablets or if the tablets seem to stick in the throat.
To check with the doctor at once if tarry stools or other evidence of gastrointestinal bleeding is noticed.

**Laboratory Tests**
Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

**Drug Interactions**
Potassium-sparing diuretics: see WARNINGS.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**
Long-term carcinogenicity studies in animals have not been performed.

**Pregnancy Category C**
Animal reproduction studies have not been conducted with Slow-K. It is also not known whether Slow-K can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Slow-K should be given to a pregnant woman only if clearly needed.

**Nursing Mothers**
The normal potassium ion content of human milk is about 13 mEq/L. It is not known if Slow-K has an effect on this content. Caution should be exercised when Slow-K is administered to a nursing woman.

**Pediatric Use**
Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS**
One of the most severe adverse effects is hyperkalemia (see CONTRAINDICATIONS, WARNINGS, and DVERDOSAGE). There also have been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see CONTRAINDICATIONS and WARNINGS); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

**OVERDOSAGE**
The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see CONTRAINDICATIONS and WARNINGS). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration (6.5-8.0 mEq/L) and characteristic electrocardiographic changes (peaking of T waves, loss of P wave, depression of S-T segment, and prolongation of the Q-T interval). Late manifestations include muscle paralysis and cardiovascular collapse from cardiac arrest (9-12 mEq/L).

Treatment measures for hyperkalemia include the following: (1) elimination of foods and medications containing potassium and of potassium-sparing diuretics; (2) intravenous administration of 300-500 ml/hr of 10% dextrose solution containing 10-20 units of insulin per 1,000 ml; (3) correction of acidosis, if present, with intravenous sodium bicarbonate; (4) use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

**DOSAGE AND ADMINISTRATION**
The usual dietary intake of potassium by the average adult is 40-80 mEq per day. Potassium depletion sufficient to cause hypokalemia usually requires the loss of 200 or more mEq of potassium from the total body store. Dosage must be adjusted to the individual needs of each patient but is typically in the range of 20 mEq per day for the prevention of hypokalemia to 40-100 mEq or more per day for the treatment of potassium depletion. Large numbers of tablets should be given in divided doses.

**Note:** Slow-K slow-release tablets must be swallowed whole and never crushed, chewed, or sucked.

**HOW SUPPLIED**
*Tablets*—600 mg of potassium chloride (equivalent to 8 mEq) round, buff colored, sugar-coated (imprinted Slow-K)
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Bottles of 1000 . . . . . NDC 0083-0165-40
Consumer Pack—One Unit
12 Bottles—100 tablets each . . . . . NDC 0083-0165-65
Accu-Pak® Unit Dose (Blister pack)
Box of 100 (strips of 10) . . . . . NDC 0083-0165-32
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*Dispense in tight, light-resistant container (USP).*

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Secretary of Health and Mental Hygiene

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Community Health Surveillance Administration

**Ebenezer Israel, M.D., M.P.H., Director,**
Epidemiology and Disease Control Program

**EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER**
COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

**JULY 1988**

## VIRUS TRANSMISSION VIA FIBEROPTIC ENDOSCOPE: RECOMMENDED DISINFECTION

A variety of infectious diseases, including hepatitis B, have been transmitted by endoscopes when the instruments were processed in an inappropriate manner between patients.

In the Centers for Disease Control guidelines regarding cleaning, disinfecting, and sterilizing patient-care equipment, a category I recommendation states, "Equipment that touches mucous membranes, e.g., endoscopes, endotracheal tubes, anesthesia breathing circuits, and respiratory therapy equipment, should receive high-level disinfection." High-level disinfection of an endoscope is effected by first, meticulously removing adherent patient material from external and internal (channel) surfaces using soap, water, and brushes and then exposing these surfaces to a germicidal chemical registered with the U.S. Environmental Protection Agency as a "disinfectant/sterilant." The germicide should be used in accordance with the instructions of the germicide manufacturer. The most widely used germicides in the field of endoscopy are several glutaraldehyde-based products and one hydrogen peroxide product.

Since fiberoptic endoscopes are used on patients with both recognized and unrecognized infections, routine procedures in the endoscopic suite should include cleaning and disinfecting the instrument in the same manner after every patient. High-level disinfection, if properly done, will inactivate both the hepatitis B virus and the acquired immunodeficiency syndrome virus--human T-cell lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV). (A subcommittee of the International Committee on the Taxonomy of Viruses has proposed the name "human immunodeficiency virus [HIV]" for the acquired immunodeficiency syndrome virus.)

In virtually every reported instance of disease transmission associated with endoscopes, there has been a major error in either the cleaning, disinfecting or sterilizing of the

instrument. For example, hepatitis B was transmitted to one patient after the air/water channel was not filled with liquid germicide as the instrument was being disinfected after examination of a known index patient, and Serratia marcescens was transmitted to multiple patients when an endoscope was inadequately cleaned before an ethylene oxide sterilizing treatment.

Routine high-level disinfection of endoscopes is a demonstrably safe procedure if done in a meticulous and consistent manner. However, after a patient known to be infected with hepatitis B, HTLV-III/LAV, or any other infectious agent is examined, sterilization of the instrument would be a prudent measure to achieve the highest level of confidence that the instrument is safe for use on the next patient. Also, sterilization of the instrument before examination of an immunocompromised patient, e.g., one infected with HTLV-III/LAV, should be considered. Since flexible fiberoptic endoscopes are not heat stable and cannot withstand prolonged immersion in liquid chemical germicides, the only way to sterilize the instruments is by using ethylene oxide gas. This procedure may remove an instrument from service for a matter of hours to days, depending on the type of ethylene oxide unit used.

Also, the accessories to the flexible fiberoptic endoscopy set, such as biopsy forceps and reusable cytology brushes, may be more hazardous with respect to disease transmission than the optic portion of the set. The internal lumens of these spring like devices invariably become contaminated with patient material during use, and this material is virtually impossible to remove during routine precleaning. If an item cannot be cleaned, then a disinfecting treatment will fail and even an ethylene oxide gas sterilization cycle may be compromised. A recent report has implicated an inadequately disinfected biopsy forcep in transmission of Salmonella newport from an index patient to eight subsequent patients during colonoscopy. These types of endoscopic accessories that are heat stable should be cleaned as well as possible and then routinely sterilized by steam autoclaving after each patient. The heat will penetrate any residual organic material and ensure that infectious agents will not be transmitted from patient to patient.

Flexible fiberoptic endoscopes and many of their accessories are expensive and delicate. To ensure longevity, proper functioning, and safety of the instruments, the manufacturer's instructions for use and between-patient processing should be closely followed.

Walter W. Bond, MS
Hospital Infections Program
Centers for Disease Control
Atlanta

REFERENCES AVAILABLE UPON REQUEST.

Permission granted for QUESTIONS AND ANSWERS "Copyright 1987, Journal of the American Medical Association", Feb. 13, 1987--Vol. 257,No. 6.

## LYME DISEASE UPDATE

Since the article "Lyme Disease:Epidemiological Characteristics in Maryland, 1984-1986" was published, the Centers for Disease Control's case definition for Lyme disease has been changed. In counties endemic for Lyme disease, including all of Maryland, the new case definition will only require Erythema Chronicum Migrans (ECM). Including only those cases of Lyme disease in Maryland that conform to the new definition, the epidemiological characteristics remain essentially the same. Of the 45 cases reported for the three years, 29 cases (65%) reported ECM. Analyzing only ECM cases, the age range was from two to 77 years, with a Male:Female ratio of 3:1. Seventeen cases (58%) had symptoms of arthritis. Neurological symptoms were reported in five persons (17%), and there was one person (3%), with cardiac symptoms. Sixteen persons (55%) were serologically positive. The geographical distribution of the cases in the counties was as follows: Queen Anne's and Montgomery - four each; Kent, Prince George's, Talbot and Cecil - three each; Worcester and Harford - two each; Dorchester and Baltimore - one each; and Baltimore City - three cases.

**REFERENCE:**

1. Thambidurai, RM, Grigor, JK, Horman, JT, Israel, E. Lyme Disease:Epidemiological Characteristics in Maryland, 1984-1986. Published in the Maryland Medical Journal, June 1988.

## MALARIA PREVENTION INFORMATION SYSTEM

Information on prevention of malaria for travelers is now available 24 hours a day by calling (404) 639-1610. The information system, which is a CDC pilot project, gives general information about malaria and malaria prevention and detailed recommendations on malaria prevention in specific geographic areas (Africa, the Indian subcontinent, Mexico, Central America and the Caribbean, South America, China and Southeast Asia, and Oceania). Information on prevention of malaria in children and pregnant or breastfeeding women is also available. Callers can select any one or all of the informational messages and should be prepared to write down the names and dosages of drugs. The information will be updated as needed.

## PRENATAL SCREENING OF ALL PREGNANT WOMEN FOR HEPATITIS B SURFACE ANTIGEN

For the purpose of preventing perinatal transmission of hepatitis B virus, the Immunization Practices Advisory Committee (ACIP) recommends that all pregnant women be screened for hepatitis B surface antigen (HBsAg) early in pregnancy. The HBsAg test can be added to the routine prenatal "panel" of tests to avoid additional patient visits. Routine follow-up testing later in pregnancy is not necessary. An additional HBsAg test can be ordered during the third trimester, if the future mother is thought to have acute hepatitis or exposure to hepatitis, or

high-risk behavior, such as parenteral drug abuse has occurred during the pregnancy.

Women who present for delivery without documentation of HBsAg results should be tested as soon as possible after admission and tests results should be obtained **within 12 hours.**

Testing for HBeAg or other hepatitis B markers is not necessary for maternal screening.

The newborn babies of HBsAg positive mother, once they are physiologically stable, preferably within 2 to 12 hours of birth, should receive intramuscularly 0.5 mL HBIG (hepatitis B immune globulin) and at a different site 10 µg plasma derived or 5 µg recombinant hepatitis B vaccine. If vaccine is not available, the first dose can be given within 7 days after birth. The second and third doses should be given 1 and 6 months after the first. Testing the infant for HBsAg and its antibody (anti-HBc) is recommended at 12 to 15 months of age to monitor the effectiveness of therapy.

HBIG and hepatitis B vaccination do not interfere with the routine childhood immunizations.

Adapted from: CDC.MMWR 1988,37,22:341-346,351.

## CONFERENCE ON UNIVERSAL PRECAUTIONS IN NURSING HOMES

A conference on "Nursing Home Administration:Infection Control in the Age of AIDS" is being presented on July 14, 1988, at the Deer's Head Hospital Center, Salisbury, Maryland. The conference starts at 8:30 a.m. and ends at 4:15 p.m. Topics on the program include:

1. Nursing Home Administration in the Age of AIDS;
2. AIDS/Hepatitis B:Epidemiology, Transmission, Prevention;
3. Infection Control Policy Trends;
4. Universal Precautions:Administrative Considerations; and,
5. AIDS:Looking Towards the Future.

Registration is free. Lunch and coffee breaks are $5.00.

Registration forms may be obtained from the Division of Infection Control, (301) 225-6681.

The conference is being presented jointly by the AIDS Administration, the Epidemiology and Disease Control Program, and the Licensing and Certification Program.

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# MR UPDATE

## MRI Advances the Detection of AVM's

### BRAIN EXAMINATION




**HISTORY:** A 52 year old man had two small right occipital hemorrhages, 18 months apart. After resolution, negative studies included two cerebral arteriograms and contrast CT scans.

**SCAN:** Several dark curvilinear structures, evidence of the flow void phenomenon, indicate abnormal vasculature in the right occipital lobe. Associated high signal intensity of adjacent white matter is compatible with edema, hemorrhage, or gliosis. Together these findings are consistent with occult arteriovenous malformation (AVM).

**MRI HIGHLIGHTS:** MRI is highly sensitive for AVM's which are otherwise occult by arteriography or CT scanning. These may be found in patients with spontaneous hemorrhage, seizure disorder, or other clinical presentations. In addition, the sensitivity of MRI for intracranial hemorrhage is being increased through the use of new partial flip imaging techniques. Refinements in signal processing, surface coils, and other techniques continue to expand the clinical indications of MRI. Because of its sensitivity, safety, and patient comfort, MRI is the screening technique of choice for most CNS abnormalities.

---

Maryland Magnetic Imaging operates its MRI system with all available upgrades including contiguous slices as thin as 2.5mm; quadrature detection head, body, and extremity coils; large field of view spine coil; dedicated cervical coil; partial flip imaging; single breath-hold body imaging; and cardiac and respiratory gating.

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# Executive Director's Newsletter

July 1988

**BREAST SURGERY**

The Faculty has been in contact with the Chronic Disease Prevention Division of the Department of Health and Mental Hygiene concerning a survey on and the development of two booklets on breast augmentation and reconstruction. Maryland law requires that physicians must provide any woman considering breast augmentation or reconstruction with a booklet summarizing possible medical complications of the procedure. The Department has approached surgeons performing these procedures and requested that they ask their patients to participate in the survey. It is the Faculty's understanding that the responses to the survey will be used to revise the interim booklets being provided by the Department. The Faculty expects to continue to work with the Department as it has in the past in the development and revision of summaries that require physicians to educate their patients as to certain medical or surgical procedures.

**PRIME**

On June 21, 1988, the Insurance Division of the Maryland Department of Licensing and Regulation issued a Cease and Desist order to PRIME, the Professional Risk Insurers Management Exclusive Company, ordering that the company discontinue the sale of malpractice insurance in the state of Maryland. According to the Insurance Division, PRIME does not have any company agents or brokers in Maryland and is not licensed to conduct business in any state in the nation. The Division said that if the company continues to solicit in the state, it could be subject to criminal prosecution.

**SPECIALIST IDENTIFIER**

Physicians are reminded that they may not represent to the public that they are a specialist in any field of medical practice unless identified as such by the Board of Physician Quality Assurance (formerly the Board of Medical Examiners).

Application for specialty designation is open to all licensed physicians in Maryland. If a physician is certified by the American Board of Medical Specialists, the identification is automatically given by the Board upon confirmation of that credential. If not certified by the American Board of Medical Specialists, the physician must complete an application outlining specific training and experience in the requested specialty. Applications are referred to the Med-Chi Committee on Specialist Identification for evaluation and recommendation to the Board. The criteria used for such evaluations were developed jointly by Med-Chi and the Board and are set forth in

administrative regulations having the force and effect of law. Applications may be obtained from the Board of Physician Quality Assurance by calling (301) 225-5900.

**TAX-EXEMPT STATUS**

Possible changes in unrelated business income tax provisions continue to be under close scrutiny by the Oversight Subcommittee of the House Ways and Means Committee. It now appears that any immediate action is unlikely because of the complexities of the issue and major Congressional awareness spurred by the Subcommittee's pre-Memorial Day recess action proposing an "aggregation" concept that would threaten the tax-exempt status of many charitable organizations.

AMA lobbyists have been meeting regularly with Treasury Department officials to discuss concerns about the damaging effects that the aggregation approach could have on many charitable organizations. They also have been making contact with members of the Subcommittee and some members of the full Committee toward the same purpose. Enthusiasm for aggregation has waned somewhat now that members of the Subcommittee are seeing detailed information and more fully understand the proposal's ramifications.

**COST OF PEER REVIEW EXAMINATION**

The statement in §14-502 of the Health Occupations Article, which states that "the medical society or Faculty committee may request the Commission to direct a physician to submit to an appropriate examination," refers to a physical or mental examination of the physician, not a peer review examination of the physician by the medical society or its components. Accordingly, the reference to "costs of any examination" means costs of a physical or mental examination payable by the Board of Physicians Quality Assurance (formerly the Commission on Medical Discipline). It does not mean that a peer review committee of the Faculty or its component societies could charge for the costs of a peer review examination.

**MED MUTUAL**

The Medical Mutual Society has notified the Faculty of its willingness to make presentations to component societies, specialty societies, or any group of physicians who might have questions about liability insurance coverage. For further information, contact Raymond Yow MD, Chief Executive Officer at 785-0050.

Angelo J. Troisi, FACHE
Executive Director

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# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

## REQUIREMENTS FOR APPROVAL OF PROFESSIONAL CORPORATE NAMES

The following is a summary of Maryland law on the requirements for approval of a corporate name for a professional association or corporation. This summary appears on pages 29 and 30 of the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in the State of Maryland. (November, 1984). It is a summary of the applicable Maryland law contained in 5-101 through 5-122 of the Corporations and Associations Article.

**PROFESSIONAL CORPORATION/NAMES:** Under the laws of the State of Maryland, one or more physicians licensed to practice medicine and surgery in the state may organize and become stockholders of a professional corporation. The corporate name of a professional corporation shall contain the words ''chartered,'' ''professional association,'' the abbreviation ''P.A.,'' or the abbreviation ''P.C.'' (Corporations & Associations 5-109).

The corporate name of a professional corporation shall contain the surname of one or more stockholders unless:

1) The Corporation has, or when incorporated will have, at least four stockholders;

2) The name of the corporation is approved by the appropriate licensing unit as a name which is in accordance with the established ethical standards, rules and regulations of the profession (See Guidelines for Professional Corporation Names in the Compendium);

3) A certificate of authorization for use of a corporate name is issued by the appropriate licensing unit to the corporation or to its incorporator;

4) The charter document which adopts the name states that the corporation, in the case of articles of incorporation, will have at least four stockholders or, in the case of articles of amendment, already has at least four stockholders; and

5) The certificate of authorization for use of corporate name issued by the licensing unit is attached to the charter document in which the name is adopted.

If the number of stockholders is reduced below four, the corporation must file, within 90 days after the reduction, articles of amendment adopting a new corporate name which must include the surname of at least one stockholder. This requirement may be waived if the number of stockholders increases to at least four before the completion of the 90 day period (Corporation & Associations 5-110).

All applications for approval of the requested corporate name must be given by the Medical and Chirurgical Faculty of the State of Maryland. Approval is granted following consideration of the established ethical standards, rules, and regulations of the medical profession. If the Faculty and the appropriate licensing unit approve the proposed corporate name, a certificate of authorization for a corporate name is issued. A professional corporation may issue capital stock. The stock for physician corporations may only be issued to physicians, licensed to practice medicine and surgery (Corporations & Associations 5-111, 112).

Guidelines for Professional Corporate Names have been adopted by the Medical and Chirurgical Faculty of the State of Maryland. The Guidelines appear on page 66 of the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in the State of Maryland, and are used by the Faculty when considering the approval of a corporate name.

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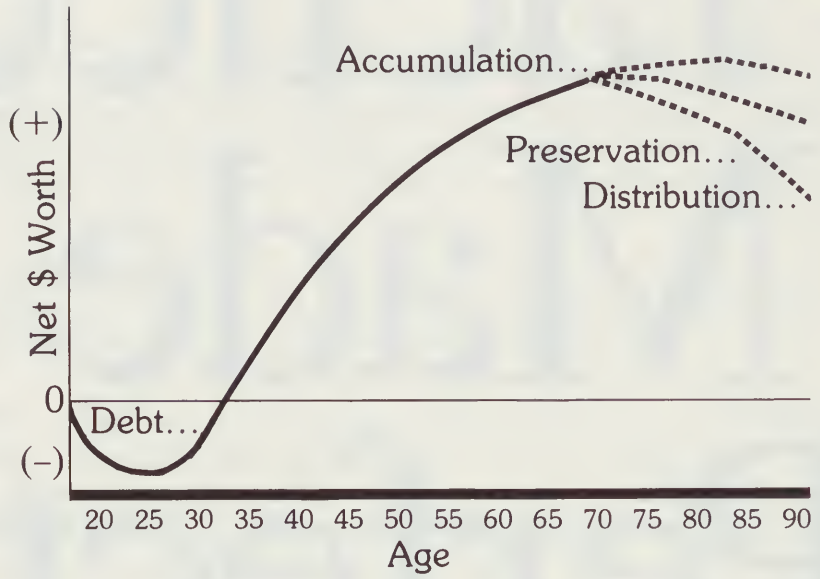
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# One Minute with Diabetes

## C-Peptide

*Doctor, At a lecture on diabetes recently the speaker said that all diabetic patients should have their C-peptide level checked. What is C-peptide? Has this test been performed for me?*

C-peptide is a body chemical of considerable interest to those doing research in diabetes, but it is not of concern in routine diabetic care.

Insulin is synthesized in pancreatic beta cells by way of a single polypeptide chain of 86 amino acid residues. This insulin is called proinsulin or "big insulin." About the time insulin is released from the pancreas to the body circulation, a splitting takes place forming C-peptide and insulin. If C-peptide is demonstrated by assay of blood it would indicate the individual was producing at least some insulin from his or her beta cells. This would be characteristic in noninsulin-dependent diabetes where the problem is more one of insulin resistance than lack of production. In insulin-dependent diabetes almost no C-peptide would be found.

Injected insulin does not confuse the test because commercial insulin is free of C-peptide.

An assay of urine can also be done for C-peptide. Because the testing result varies from laboratory to laboratory it is not possible to state a range of normal readings applicable to all laboratories.

In the usual management of diabetes, a C-peptide test would not change the program of care and need not be done. In the research area the C-peptide test is a useful procedure and is gradually becoming standardized.

***DeWITT E DeLAWTER*** **MD**
**Editor**

# Letter to the Editor

## Celiac Sprue

Noting that 1988 is the hundredth anniversary of Dr. Samuel Gee's historic paper on Celiac Sprue, we respectfully submit the following request to the physicians of America:

1. Please expand the traditional medical history to include open-ended questions concerning infancy and childhood as well as family illnesses beyond cause of parental deaths, cancer, diabetes, and heart disease.
2. Please consciously consider Celiac Sprue as a differential diagnosis in view of physical or mental symptoms of malnourishment or malabsorption.
3. Please consider the possibility of Celiac Sprue coexisting with one or more other autoimmune diseases.
4. Please employ the ELISA test for Antigliadin Antibodies as a screening tool.

***HELEN HAUSCHILD*** **RN**
**Education and Research Chairman**
**Celiac Sprue Association/United States of America**
**2313 Rocklyn Drive, S-1**
**Des Moines, IA 50322**
**(515-270-9689)**

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| *July* | *Allen Hettleman MD* | *301-653-0366* |
| | *Bayard Z. Hochberg Esq.* | *301-685-2922* |
| *August* | *George Linhardt MD* | *301-268-3005* |
| | *Jeanette A. Plante Esq.* | *301-752-1630* |

**In the Matter of**
**Mohammad Hosein Amirgholi MD**
**Before the**
**Commission on Medical Discipline**

**Order for Emergency Suspension of Medical License**

Based on information received from the Criminal Division, Superior Court of the District of Columbia, and the District Court of Maryland for Prince George's County regarding the medical practice of Mohammad Hosein Amirgholi MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law and Order.

**Findings of Fact**

Based on all the information known and available to it, the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine in Maryland;
2. On January 19, 1988, Respondent pled not guilty to the offense of simple assault, was subsequently tried by jury and found guilty in case number M7502-87 in the Criminal Division of the Superior Court of the District of Columbia. The allegations underlying the conviction as set forth in the Affidavit in Support of an Arrest Warrant, a copy of which is attached hereto as Exhibit 1, include the following:
   a. On June 3, 1987, A sought medical treatment from Respondent for pain in her ear.
   b. During the course of the treatment, Respondent requested that A drop her pants so that he could administer a shot of penicillin.
   c. In response to A's request that the shot be given in her arm, Respondent stated that it must be administered in the buttocks because if administered in the arm it would make the area extremely sore.
   d. After A pulled her pants down a little, Respondent gave her the shot and then placed his finger in her vagina. Respondent asked A "do you want to do it?" to which she replied "no."
   e. A left the office and immediately notified the police.
3. On January 19, 1988, Respondent received a sentence of 1 (one) year, suspend all but 60 (sixty) days, $500 fine to be paid after 6 months of release, and 5 (five) years probation in case number M7502-87 in the Criminal Division of the Superior Court of the District of Columbia. In addition to being ordered to observe the general conditions of probation, Respondent was ordered to observe the following conditions of probation:
   (1) Cooperate in seeking and accepting medical, psychiatric treatment in accordance with written notice from his Probation Officer;
   (2) May not examine female patients without the presence of a female nurse;

Cost of $10 under the Victims of Violent Crime Compensation Act of 1981 were also ordered. A copy of the Judgment and Commitment/Probation Order in case number M7502-87 in the Criminal Division of the Superior Court of the District of Columbia is attached as Exhibit 2.

4. On September 23, 1987, in the District Court of Maryland for Prince George's County, a warrant was issued for Respondent's arrest pursuant to an Application for Statement of Charges filed in case number 644141E1. A copy of the warrant is attached to Exhibit 3. A copy of the Application for Statement of Charges is attached as Exhibit 4.
5. The Application for Statement of Charges referenced in paragraph 4 (four) above contained the following allegations:
   a. On September 21, 1987 at 9:00 a.m., B arrived at Respondent's office for her scheduled appointment to have a skin allergy test.
   b. At approximately 9:45 a.m., B was seen by Respondent who instructed her to remove her left arm from her shirt to facilitate testing procedures. Respondent further instructed B to undo her pants to relieve the tightness around her stomach. B complied with Respondent's instructions.
   c. During the course of the skin test, B had an occasion to start crying. After noticing the tears, Respondent reached out and patted B on the right shoulder, which was perceived by B as a comforting gesture.
   d. Immediately thereafter, Respondent pulled B closer to him and attempted to kiss her while simultaneously placing his left hand inside her pants to fondle her buttocks.
   e. B pushed Respondent away at which time Respondent apologized and asked B to allow him to finish his job.
   f. Following the appointment, B responded directly to the Oxon Hill District Police Station and reported the incident.
6. In his practice as a physician, Respondent presents himself to the public as a specialist in otolaryngology, allergy, and head and neck surgery.
7. In the unrestricted practice of medicine by a

---

*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*

physician who presents himself to the public as a specialist in otolarnygology, allergy, and head and neck surgery, Respondent has potential access to and contact with large numbers of consumers of various ages and both sexes.

8. As a necessary component to his practice as a physician, Respondent often administers tests and treatment to patients who must partially disrobe.
9. The allegations described in paragraphs 2 (two) and 5 (five) above come from two different patients, were reported to different police departments in two different jurisdictions and have or will require disposition by two different courts.
10. The allegations described in paragraphs 2 (two) and 5 (five) above suggest a pattern of behavior and a course of conduct toward new and established female patients that is unprofessional, immoral, incompetent, and criminal in nature.

**Conclusion of Law**

Based on the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b), Annotated Code of Maryland.

It is this 23rd day of March 1988 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Government Article, §10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission's administrator (1) his diploma-sized Certificate of the Board of Medical Examiners, (2) his current Department of Health and Mental Hygiene License Renewal Certificate, and (3) his current wallet-size license renewal card; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

Area meetings and course announcements
are listed each month under
*Doctors Take Note*

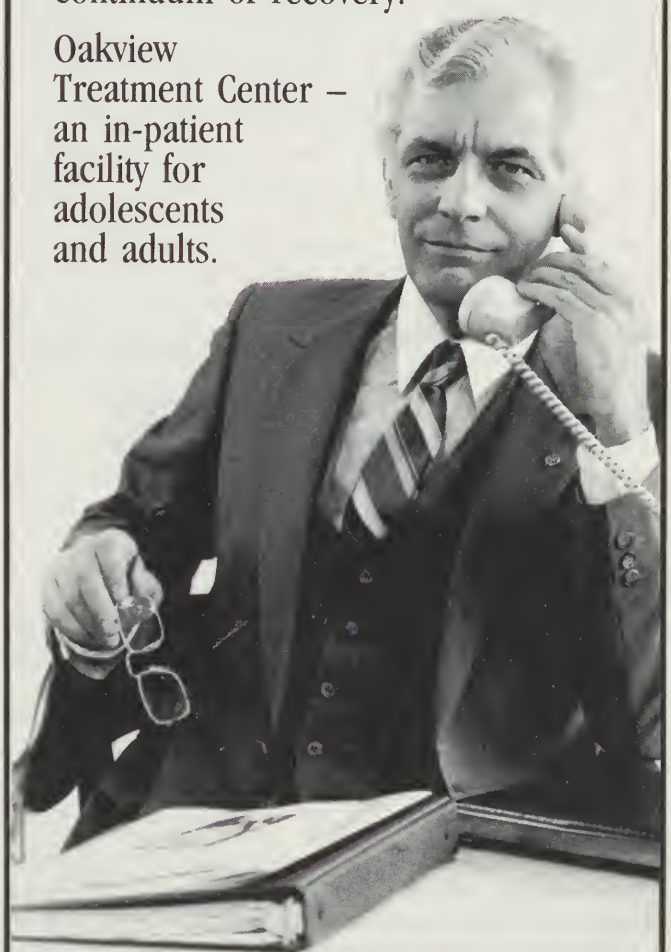

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## Carcinoma of the Pancreas and Periampullary Area

## Part III: Therapeutic Approaches

Resection seems to offer the best chance to prolong survival of a patient if it can be performed with low operative mortality and low postoperative morbidity. Tumors of the ampulla, periampullary area, and the distal bile duct usually are managed by the Whipple procedure, that is, radical proximal pancreaticoduodenectomy.

Controversy still exists over which surgical approach should be used in the management of carcinoma of the head of the pancreas. While some prefer a double bypass procedure, that is, bypass for the jaundice and a bypass for the gastrointestinal tract, others continue to carry out the classic Whipple procedure. In the meantime, total pancreatectomy and regional pancreatectomy are still performed by special groups.

While total pancreatectomy (as well as regional pancreatectomy) eliminates the pancreaticojejunal anastomosis, eradicates foci of multicentricity of cancer (which occur in 20 to 30 per cent of the patients with cancer of the pancreas), permits easy accessibility for extensive lymphadenectomy, and is easier to perform, it results in endocrine and exocrine functional loss, a brittle diabetes that is not easy to control, a risk of peptic ulceration, and all this with no evidence of improvement in long-term results when compared to the classic pancreaticoduodenectomy.

I believe the standard Whipple operation remains the most popular procedure for carcinoma of the head of the pancreas. It preserves the pancreatic endocrine function and gives the same survival as the total pancreatectomy. The Whipple procedure should be converted to total pancreatectomy if the frozen section of the resected edge of the pancreas reveals tumor or if there are multiple tumors in the body and tail of the pancreas. Another indication for total pancreatectomy is when the surgeon believes the remaining pancreas is not suitable and safe for a pancreaticojejunostomy anastomosis.

The preoperative preparation of the patient for pancreaticoduodenectomy or total pancreatectomy is of utmost importance. The patient should be evaluated carefully and should receive the required blood elements such as red blood cells and albumin. The patient should be well hydrated and the serum electrolytes corrected. Serum creatinine and BUN must be checked to insure good functioning kidneys. Fat soluble vitamins should be given freely as these patients are usually deficient in this category. In addition, the cardiac status should be evaluated, pulmonary hygiene should be carried out in preparation for major surgery, and we usually have a complete large bowel prep. Large bowel prep is of great value in case the tumor extends and involves a segment of the large bowel or one of the main vessels of the large bowel such as the middle colic.

Availability of percutaneous cholangiography and drainage either intraduodenally or externally is of great value. It has been shown that patients who have elevated serum bilirubin up to 10 mg% have 12 percent mortality rate due to renal failure, sepsis, and hemorrhage. On the other hand, patients with bilirubin of 20 mg% have double the morbidity and mortality rates.[1] Therefore, percutaneous drainage during the preoperative preparation can be ideal.

Most patient with pancreatic cancer do not have resectable tumors when the diagnosis is made. Delay in making the diagnosis remains a problem, but resectable lesions are unlikely to become unresectable as a result of physicians' delay. Palliative management of pancreatic cancer should be aimed at relieving the obstructive jaundice, the anticipated duodenal obstruction, and the pain.

The type of bypass procedure continues to be controversial. While some surgeons carry out simple cholecystojejunostomy claiming it gives the same results as more complicated procedures, it has its limitations. This operation has slightly higher morbidity. It cannot be performed if the patient has had previous cholecystectomy or if the cystic duct joins the common duct far distally near the tumor. Roux-en-Y choledochojejunostomy is the main acceptable procedure, yet I strongly believe that choledochoduodenostomy is very acceptable in those patients who have very low survival rates.[2]

Tumors of the periampullary area and the pancreas that extend and invade the duodenum rarely cause complete obstruction, preventing the bile flow through the duodenum. Gastrointestinal bypass to prevent future obstruction secondary to duodenal invasion in patients with unresectable disease is justified in those patients who have no liver metastases as they may have slightly longer survival (than those with liver metastasis). However, it has been estimated that 1 out of 6 patients may require reexploration for a gastrojejunostomy. In addition, performing an early gastrojejunostomy, that is, prior to clinical evidence of duodenal obstruction, may not stay patent until it is needed, and may predispose to peptic ulceration. However, such patients have short survival.

Intraoperative as well as postoperative irradiation, with or without 5-Fluorouracil, gave equivocal results in patients with unresectable disease. Chemotherapy alone for those with metastases remains experimental. Percutaneous celiac + splanchnic blocks alleviate pain,

*If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).*

which is important in the management of these patients.

*Tumor Conferences are held weekly on Tuesday between 8–9 AM in Room N13E28 at the University of Maryland Medical Systems. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

***E. GEORGE ELIAS* MD**
**Professor of Surgery and Oncology**
**Director, Surgical Oncology Program**
**University of Maryland Medical Systems**

### References

1. Braach, J.W. and Gray, B.N. "Considerations that Lower Pancreatico-duodenectomy Mortality." *Am J Surg* 133:480,1977
2. Sarr, M.G. and Cameron, J.L. "Surgical Palliation of Unresectable Carcinoma of the Pancreas." *World J Surg* 8:906,1984

### Payment Problems?

The Coordinating Council on Alzheimer's Disease and Related Disorders, a body created by the Maryland General Assembly, is interested in knowing whether physicians treating victims of Alzheimer's disease, multi-infarct dementia, or similar disorders have difficulty obtaining payment for their services from third-party payers (including Medicare and Medicaid). In the past, some physicans have stated that they have had these difficulties, especially in offering psychiatric services.

Physicians who have had such difficulties should contact Michael S. Franch PhD, Staff Coordinator, Coordinating Council on Alzheimer's Disease and Related Disorders, Services to the Aging, Department of Health and Mental Hygiene, 201 W. Preston St., Baltimore, MD 21201 (301-225-6770) to report their experience. Such reports may be helpful to the Coordinating Council in making recommendations to the Governor and General Assembly.

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# Maryland's EMS System

The opening of the R Adams Cowley Shock Trauma Center, slated for patient occupancy in January 1989, leads one to reflect on Maryland's emergency medical services (EMS) system. This system, which is the model for systems in the United States and abroad, had its humble beginnings in 1961 under the leadership of R Adams Cowley, a University of Maryland cardiothoracic surgeon. An Army grant was obtained to support a special two-bed shock research unit on what is now the "4E" wing of the University Hospital.

Two years later, a grant from the National Research Center was awarded to Dr. Cowley and his colleagues to build a five-story facility to treat severely injured or critically ill patients. That building, the current Shock Trauma Center, was completed in 1969. The new facility will supersede the parent building as the only free-standing trauma center in the United States and serve as the hub of Maryland's system of trauma and other emergency care, the Maryland Institute for Emergency Medical Services Systems (MIEMSS).

MIEMSS evolved to allow for the provision of emergency care in Maryland. Currently under its purview are 10 areawide trauma centers, 20 specialty referral centers, the Maryland State Police Med-Evac Helicopter program with seven bases, a statewide emergency medical communications system, and programs to train and certify prehospital care providers.

Ground breaking for the R Adams Cowley Shock Trauma Center took place on December 20, 1985. The eight-story building will house 72 patient beds that when added to 66 step-down patient beds in the current facility will create a 138-bed unit. The new center will have an 11-bay admitting area, 5 surgery suites, an organ-procurement and instant-autopsy suite, and a radiology suite for CT scanning and angiography. In addition, the Center will house a pharmacy, a "stat" lab, a family services department, a computer center, offices, and a 190-seat auditorium. A rooftop heliport will facilitate patient transport to the admitting area.

Over the past 27 years, admissions to the Shock Trauma Center have continued to increase; 2,800 patients now are treated at the Center annually. Before the end of 1988, the 27,000th patient admission will have taken place. During the almost three decades of growth, development, and delivery of patient care, the systems approach to trauma and the care of the injured and critically ill continues to be upgraded. This issue of *MMJ* celebrates MIEMSS and the new R Adams Cowley Shock Trauma Center. The following ten articles can give only a sample of the organization of and care delivered by Maryland's premier EMS system and Shock Trauma Center.

***CARL A. SODERSTROM*** **MD**
**Issue Editor**

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# The Maryland Emergency Medical Services System: An Update

*AMEEN I. RAMZY MD*

**Comprehensive emergency medical care is no longer a goal; it is a public expectation. In Maryland, the goal and the expectation have been achieved with the evolution of a comprehensive emergency medical services (EMS) system.**

The blueprint for the Maryland EMS system was described in the *Maryland State Medical Journal* in July 1975[1] in terms of goals and objectives as well as plans for the components to reach those goals. Now, 13 years later, we report the evolution of the system as well as its current components and future plans.

The Maryland EMS system dates back to the initial two-bed clinical Shock Trauma Unit set up in 1961 in Baltimore. This developed into the Center for the Study of Trauma, which eventually evolved into the statewide EMS system. In 1973, then Governor Marvin Mandel issued an Executive Order that established the first statewide EMS system in the country: the Division of Emergency Medical Services (DEMS) within the Maryland Department of Health and Mental Hygiene and the Maryland Institute for Emergency Medicine (MIEM) within the University of Maryland. In 1977, the Division of Emergency Medical Services and the Maryland Institute for Emergency Medicine were amalgamated into the Maryland Institute for Emergency Medical Services by action of the Maryland General Assembly. This fusion of the Shock Trauma Center, the highest level of trauma care available in the state, with the statewide EMS system was a fundamental aspect of the ongoing Maryland EMS system. Through this fusion, observations of both prehospital care and inhospital care as critical elements in a continuous spectrum can be assessed and analyzed to lead to improved outcomes.

One of the landmark documents in EMS in the United States was the 1966 report by the American Academy of Sciences, "Accidental Death and Disability: The Neglected Disease of Modern Society."[2] Dr. R Adams Cowley, the founder and Director of MIEMSS, participated in the development of that document, which placed on the national agenda the importance of developing comprehensive emergency medical services for every community. Within Maryland, the objectives have been achieved through the concerted efforts of all who have a stake in the system: health care providers, patients, and the public.

As the EMS lead agency in Maryland, MIEMSS is responsible for coordinating emergency medical services in the state. This system has numerous components: training of prehospital EMS providers, transportation with appropriate care, a statewide communications system, designated trauma centers, and specialty referral centers. In recent years, the system has matured to recognize the importance of rehabilitation as another component in the spectrum of emergency medical services and to see the essential role that an EMS system has in evaluating itself as well as in providing public education and leadership in injury prevention.

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## Prehospital Training

The Office of Prehospital Training and Certification within MIEMSS coordinates the training of prehospital providers in the state. Prehospital care levels are categorized as Basic Life Support (BLS) and Advanced Life Support (ALS). Of the more than 20,000 BLS and ALS providers in the state, a number are volunteers; many employed prehospital EMS providers also volunteer their time in their local communities.

*Basic Life Support* The first responder is an individual who has undertaken 40 hours of training to provide initial care at the scene of a vehicular crash or other emergency. They are often law enforcement officers who, in some areas, may be the first to arrive at a scene. Emergency Medical Technicians (EMT-As) are trained to provide BLS through a 110-hour process that includes 95 hours of didactic and practical instruction, 5 hours of testing, and 10 hours of instruction by the local program. Initial EMT-A training is through the Maryland Fire and Rescue Institute, a component of the University of Maryland. Continuing education for EMT-As is given through the Office of Training and Certification of MIEMSS and requires 24 hours' training (12 hours each of skills refresher and didactic instruction) within a 3-year period. EMT-As are certified by MIEMSS.

*Advanced Life Support* ALS providers in Maryland are designated Cardiac Rescue Technicians (CRTs), Aviation Trauma Technicians (ATTs), and Emergency Medical Technician/Paramedics (EMT-Ps). CRTs are trained for 160 hours above the basic EMT level. In addition to providing BLS, these individuals can administer intravenous therapy and cardiac defibrillation. ATTs complete comparable training and are members of the Maryland State Police Aviation Division. The ATTs are Maryland State Police men and women who furnish care on board the Maryland State Police helicopters, which are a public service for both from-the-

scene (for example, from vehicular crash sites) and critical interhospital transfers. EMT-Ps are trained according to a national standard curriculum, which in Maryland is a minimum of 300 hours of training above the EMT-A level. These individuals constitute the highest level of prehospital care available nationally; they are trained in the administration of additional medications as well as in endotracheal intubation and cardioversion and, most important, in advanced patient assessment. Efforts are under way to complete the transition of all ATTs to the level of EMT-P.

All prehospital ALS providers in Maryland function medically under a single set of protocols: the *Maryland Medical Protocols for Cardiac Rescue Technicians and Emergency Medical Technician/Paramedics.* In this way, there is commonality and standardization for all medical functions performed in the prehospital phase. Through the state's communication system, ALS providers can obtain direct consultation from physicians in emergency departments and specialty centers. This consultation allows for transmission of cardiac telemetry so that abnormal rhythms can be diagnosed and medical care can be directed by the consulting physician.

ALS providers are certified by the Board of Medical Examiners, the same authority that licenses physicians in Maryland.

### Transportation

Throughout the state, public service emergency ambulance care is provided by over 450 ambulance companies. In most of the state's 24 jurisdictions (the 23 counties and Baltimore City, sometimes referred to as the state's political subdivisions), ambulance service is a part of fire department services.

Helicopter transportation is provided through a public service Med-Evac program operated by the Maryland State Police Aviation Division and coordinated with MIEMSS. There are seven helicopter sections throughout the state, and an eighth section is being planned (Figure). For many years, Med-Evac services have used Bell Jet Ranger helicopters. Plans are under way to convert the entire fleet to twin-engine medium-sized helicopters. The goal is 24-hour-a-day service with EMT-P level of care at each of the eight sections.

### Communications

The public gains initial access to the EMS system via the 9-1-1 system. While this is often taken for granted, it must be recognized that 9-1-1 is not universally available throughout the United States; Maryland was the second state to enact a statewide 9-1-1 system. (It is important that this be referred to as the "nine-one-one system," rather than the "nine-eleven system." People sometimes panic when they use the system, and when the moment of crisis occurs, they may look for an "eleven" button to push after they dial the initial "nine.")

Calls for emergency 9-1-1 assistance typically are channeled into "central alarms" operated by counties/jurisdictions. Through these central alarms, calls are distinguished as to whether the caller requires fire, police, or emergency medical service. Several central alarms in the state include "enhanced 9-1-1" service, which captures the number from which the individual is calling, so that if an individual is in a critical situation or if, for example, the caller is losing consciousness while requesting aid, the origin of the call can be tracked and assistance dispatched.

Calls for emergency medical assistance result in the dispatching of ambulance services to the emergency site. Arriving at the scene, prehospital care providers then communicate with receiving hospitals via the EMS communication system. In many parts of the state, this linkage is accomplished through the central alarms. In EMS Region III (the Baltimore Metropolitan Region), the connection is via the Emergency Medical Resource Center, which links ambulances and hospitals throughout the region. The System Communication Center (SYSCOM) is located at MIEMSS and coordinates Med-Evac helicopter missions throughout the state.

ALS providers communicate with hospitals on designated medical channels specifically provided by the Federal Communications Commission for this exclusive use. These channels are in the 460-megahertz range (UHF).

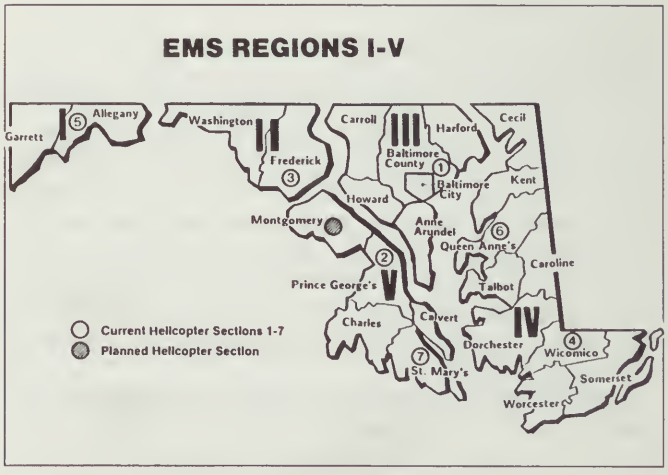



**Figure.** Maryland is divided into five EMS regions. The location of seven Maryland State Police Med-Evac helicopter sections throughout the state decreases travel times from the scene of injury to definitive medical care. An eighth helicopter section in Montgomery County is planned.

Hospitals and other medical facilities providing consultation to prehospital care providers are designated as consultation centers. Customarily, consultants are physicians in emergency departments, but consultation also is provided by other hospital facilities such as those specializing in trauma or burn care.

### Hospital Facilities

There are more than 50 acute care hospitals throughout Maryland with 24-hour emergency departments, each linked to the statewide communication system. Across the state, hospitals have been designated as trauma centers, based on compliance with the Echelons of Care and the need for access to trauma care within geographic regions of the state. (Echelons of Care describes the criteria for Maryland's trauma centers and the type of patients who would benefit from such care.) Eleven trauma centers serve the overall population of 4.2 million people within 10,000 square miles. In addition to the 11 trauma centers (including the Shock Trauma Center), 20 specialty referral centers serve specialized needs, including pediatric trauma, burns, eye trauma, and other medical needs unrelated to trauma such as neonatal and perinatal centers.

### Regional Structure

While the origins of the Maryland EMS system date back to 1961, formal and statutory development of the system began with the 1973 Executive Order and the 1977 law that established MIEMSS as the state program responsible for coordination of the system. The strength and cohesiveness of the system rest on strong leadership and active participation by all the components. Within the five EMS regions of the state, an EMS Regional Administrator employed by MIEMSS facilitates both statewide and regional development. Each region has a Regional EMS Advisory Council composed of prehospital providers, hospital providers, and consumers, all of whom act in an advisory capacity to the Director of MIEMSS. Representatives of each of the state's five Regional EMS Advisory Councils also participate in the Regional EMS Advisory Council (REMSAC) to provide a statewide forum for policy advice. Regional Medical Directors contribute their time and expertise in furthering the development of EMS prehospital protocols, quality assurance, and evaluation of new techniques.

### Expanding the Spectrum

The federal EMS Systems Act of 1973[3] included 15 components considered necessary for EMS system development. One of these components was evaluation. Within MIEMSS and the Maryland EMS system, this is addressed through Operations Research and System Evaluation (ORSA). This component of MIEMSS is responsible for collecting and analyzing data necessary for systems evaluation and future planning; for example, the state trauma registry is administered by MIEMSS through the statewide Trauma Network. (The Trauma Network, an organization of designated trauma centers, focuses on ongoing development and improvements in areas of trauma care.) Another example of systems evaluation is the statewide use of ambulance runsheets, Maryland Ambulance Information System (MAIS). These optically scanned runsheets allow for a hard-copy record of patient care to be received by the hospital admitting a patient and for system evaluation through centralized, standardized information recording.

As the Maryland EMS system has evolved, further efforts have been made throughout the EMS spectrum. A special focus on trauma prevention has included successful participation in the enactment of mandatory safety belt use and continued efforts toward mandatory motorcycle helmet use.

In the area of postacute care, it was recognized that, despite an excellent program for prehospital and inhospital care of trauma victims, there was a greater need for rehabilitation programs throughout the state. This resulted in further development of a rehabilitation program at the Montebello Rehabilitation Hospital in Baltimore, which is clinically affiliated with the Shock Trauma Center.

The maturing system has become even more sensitive to special situations such as the interaction between hospice patients and the EMS system. Recent developments have included an identification process and a medical protocol for prehospital care providers who encounter hospice patients. Overall training and education have continued for prehospital care providers, inhospital care providers (for example, the Advanced Trauma Life Support Course of the American College of Surgeons, which is administered through the Shock Trauma Center), and the public through programs to increase understanding about injury prevention and the appropriate use of the EMS system.

There has been increasing interaction between MIEMSS and other public agencies to provide improved coordination during disasters. For many years, a number of drills have been conducted with the central theme that disaster management must be an extension of day-to-day operations: the best response lies with an inherently well-functioning EMS system.

### Conclusion

As the Shock Trauma Center and the Maryland EMS system look back on 25 and 15 years of history respectively, a number of lessons have been learned that will be useful in the years ahead. The primary theme of

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cogent leadership and strong community participation still holds true. As the demand for emergency medical services continues to increase because of both a more mobile and active population and an expanding awareness of the impact of these services, there will be an increasing need for resources in this area. The Maryland General Assembly has recognized this and taken positive steps. Examples include appropriations for the construction of the R Adams Cowley MD Shock Trauma Facility, upgrading the state helicopter MedEvac fleet, and increased funding for prehospital training and communications.

The years ahead likely will involve an increasing focus on evaluation of the impact of all the components within the system and on the system's goals. In the area of injury control, the goal of the Maryland EMS system will be the eradication of preventable death and disability due to trauma.[4] This will be achieved if all those who have a role to play—transportation engineers, prehospital care providers, inhospital care providers, rehabilitation specialists, legislators, and law enforcement officials—work together toward this goal.

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# Providing Safe Med-Evac Helicopter Transport: Maryland's 18-Year Experience

*R ADAMS COWLEY MD, ALEXANDER J. GRETES BA, and CARL A. SODERSTROM MD*

**Recent crashes of aeromedical helicopters, causing loss of life and transport equipment, have increased public attention on the operation, structure, and safety of medical evacuation (Med-Evac) services.[1–9] While neither hospital-based nor public service systems have been spared these tragedies, characteristics of a public service system contribute to a lower incidence of accidents and a higher degree of safety and efficiency for patient transport.**

Four fatal crashes of commercial EMS (hospital-based) helicopters resulting in 12 deaths occurred in the first half of 1987, but there were none during the rest of that year in those operations.[9] Analysis reveals that characteristics of a public service system contribute to a lower incidence of rotocraft accidents and therefore to a higher degree of safety and efficiency for patient transport. These attributes include reduction of stress on flight crew members, elimination of hospital competition for patients, and cost-effectiveness from the sharing of resources by various agencies.

### System Development and Structure

The Maryland State Police (MSP) Med-Evac program, a component of Maryland's statewide emergency medical services program, was developed in 1967. In March 1970, formal operations were initiated by Dr. Cowley in cooperation with the MSP as a public service to the citizens of the state.[10] This arrangement provides unique life-saving services economically through the regionalized critical care system that is coordinated by the Maryland Institute for Emergency Medical Services Systems (MIEMSS).[11] The resources of designated areawide trauma centers and specialty referral centers throughout Maryland are matched with patient needs, using rapid-transport helicopters staffed by trained and certified aviation trauma technicians (ATTs).

Med-Evac helicopters are based at seven strategic locations in the state (Martin's State Airport in Baltimore County, Andrews Air Force Base in Prince George's County, Frederick Airport, Salisbury Airport, Cumberland Airport, Centreville MSP Barracks, and Patuxent River Naval Air Station in St. Mary's County). This dispersion of resources decreases aeromedical response times and thereby improves patient outcomes. It is anticipated that an additional base will be in operation by the end of 1988, fulfilling the original deployment plan of eight sections.

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A summary of the number of Med-Evac flights during the program's first 18 years of operation is presented in the Table. During the first 5 years (1970–1974), 45.0 percent of the 3,195 patient transports were "from the scene" in contrast to interhospital transports, while almost three quarters (73.4 percent) of the 15,174 patient transports carried out during the 5 years 1983 through 1987 were "from the scene."

The helicopter crew consists of a state trooper pilot and a state trooper medical observer, designated as an ATT. New pilots must possess a commercial helicopter license and an instrument rating and have completed 2,000 helicopter flight hours. Upon employment by the MSP Aviation Division, pilots must undergo 500 additional hours of flight training.

Previously, an ATT had to complete 318 hours of advanced prehospital care training established by MIEMSS. On April 7, 1987, a program was instituted to upgrade the training of an ATT to National Registry Emergency Medical Technician-Paramedic (EMT-P) level. To complete that requirement, flight medical personnel must undergo 410 additional hours of clinical and didactic training. After that training, to qualify as a paramedic they must pass both national and Maryland tests (developed by MIEMSS). It is anticipated that by the end of 1988 all medical flight personnel will have achieved EMT-P certification.

In addition to routine Med-Evac and law enforcement missions, the helicopters in Maryland's program provide special capabilities in unusual situations. Examples are

- Transport of physician/nurse "Go Teams" to an accident scene for special procedures such as amputation and for response to mass casualty incidents
- Transport of harvested human organs and of medical supplies such as plasma and platelets
- Rappelling of tactical assault team members
- Hoisting of trapped victims
- Deployment of special fire-fighting teams for high-rise building rescue
- Slingload delivery of specialized equipment to contain oil spills
- Forest fire control

A Med-Evac mission takes priority over all other mis-

sions scheduled or in progress. The total flight hours for these multipurpose helicopters is indicated in the Table.

### Safety Record

Since the creation of the MSP Aviation Division, flight crews have logged more than 87,000 hours of flight time. More than 32,000 patients have been transported in the Maryland system (through 1987). (Since 1972, over 400,000 patients have been transported in hospital-based systems nationwide, most of them inter-hospital transfers.[12]) Since most fatal accidents occur on landing or take-off, the number of flight missions is actually a more accurate record of safety than the number of flight hours. Each Med-Evac mission usually involves at least two take-offs and two landings.

Four helicopter accidents occurred during the first 16 years of the system's operation. In 1971, a Med-Evac helicopter responding to a highway crash was damaged when it collided with an overhead wire; there were no fatalities. In the following year, while on a mission to save a victim of an overdose, a helicopter went down in fog over the Chesapeake Bay, killing the two crew members. Another helicopter and its crew of two were lost in 1973 while hovering at low altitude on a routine law enforcement mission. The cause of all three incidents was pilot error.

These events led to the establishment of a training/safety section and a maintenance section within the MSP Aviation Division.[13] No helicopter accidents occurred in the subsequent 13 years. During this period (1973 to 1985) MSP flight crews completed over 25,400 flights to medical facilities and more than 124,000 total missions.

In January 1986, Maryland's fourth helicopter crash occurred, killing the two members of the flight crew. They were returning to their home base in Frederick after delivering a gunshot victim to the MIEMSS Shock Trauma Center. Rain, fog, and poor visibility created very poor flying conditions. The National Transportation Safety Board cited weather and pilot error as causes of this crash. No evidence of mechanical or technical failure was found.[14,15]

While these losses were certainly tragic events in our state's aeromedical history, the overall safety record of the Maryland system is exemplary. Between 1975 and 1985, the national fatal accident rates for aeromedical flights and commercial helicopters were 6.5 and 2.2, respectively, per 100,000 flying hours.[4] During the recent period from 1980 through 1985, the fatal accident rate (involving one or more deaths) for commercial EMS helicopters was 5.40 per 100,000 flying hours. This was almost 3.5 times higher than the 1.60 rate for non-EMS commercial flights operating under the same flying regulations and using the same general types of helicopters.[16]

According to the National Transportation Safety Board, between 1977 and 1979, the mean rate of occurrence of rotocraft accidents was 13.4 per 100,000 flying hours.[17] From 1980 through 1985, the commercial EMS

**Table. Summary of Helicopter Missions and Flight Times in Maryland**

| Year | Number of Patients Transported | | | Number of Other Missions | Flight Time (hrs) for Med-Evacs | Flight Time (hrs) for Other Missions | Total Flight Time (hrs) |
|---|---|---|---|---|---|---|---|
| | Scene | Hospital | Total | | | | |
| 1970 | 98 | 99 | 197 | 2,340 | 130.3 | 1,824.1 | 1,954.4 |
| 1971 | 155 | 236 | 391 | 6,409 | 362.2 | 3,220.3 | 3,582.6 |
| 1972 | 307 | 409 | 716 | 8,166 | 724.1 | 3,764.0 | 4,488.1 |
| 1973 | 389 | 451 | 840 | 7,220 | 754.9 | 2,703.2 | 3,458.1 |
| 1974 | 488 | 563 | 1,051 | 6,948 | 1,070.6 | 2,724.0 | 3,794.6 |
| 1975 | 545 | 553 | 1,098 | 6,492 | 1,114.4 | 2,428.2 | 3,542.6 |
| 1976 | 751 | 681 | 1,432 | 8,016 | 1,360.2 | 2,581.5 | 3,941.7 |
| 1977 | 715 | 579 | 1,294 | 6,151 | 1,309.3 | 2,645.7 | 3,955.0 |
| 1978 | 849 | 669 | 1,518 | 7,964 | 1,565.1 | 3,332.9 | 4,898.0 |
| 1979 | 1,112 | 680 | 1,792 | 8,067 | 1,664.4 | 3,142.0 | 4,806.4 |
| 1980 | 1,474 | 804 | 2,278 | 8,131 | 2,044.0 | 2,871.4 | 4,915.4 |
| 1981 | 1,653 | 803 | 2,456 | 7,692 | 2,159.7 | 2,792.9 | 4,952.6 |
| 1982 | 1,710 | 825 | 2,535 | 7,452 | 2,215.5 | 2,858.9 | 5,074.4 |
| 1983 | 1,925 | 932 | 2,857 | 8,371 | 2,486.2 | 3,414.1 | 5,900.3 |
| 1984 | 2,100 | 858 | 2,958 | 8,924 | 2,995.2 | 3,273.6 | 6,268.8 |
| 1985 | 2,475 | 876 | 3,351 | 7,379 | 2,839.0 | 3,835.3 | 6,674.3 |
| 1986 | 2,316 | 709 | 3,025 | 4,362 | 3,648.4 | 3,149.5 | 6,797.9 |
| 1987 | 2,315 | 668 | 2,983 | 5,634 | 3,940.4 | 3,864.3 | 7,804.7 |
| Totals | 21,377 | 11,395 | 32,772 | 125,718 | 32,383.9 | 54,425.9 | 86,809.9 |

*Source:* Data from Maryland State Police Aviation Division

helicopter industry had an accident rate almost twice that of non-EMS missions, being 12.34 and 6.69, respectively.[16]

Maryland's accident and fatal crash rates were 0 during the 10 years from 1975 through 1985. In the 13 years after the establishment of the safety program in 1973, there were no helicopter accidents or fatalities during 25,397 Med-Evac missions (23,578.5 flying hours) in the state (Table).

## Factors Contributing to Maryland's Record of Safety

*Crews* MSP helicopter flight crews work regular duty hours divided into 8-hour shifts. Due to leave, training, and sick time, over five crews per helicopter are required for each section that operates 24 hours per day. To avoid fatigue, sections operating 24 hours per day are assigned six pilots and six medical personnel for each helicopter. These staff ratios contrast to those of hospital-based systems, which often employ fewer flight members, who must work long hours under very stressful conditions.[4,5,8,18–21]

In its report of 59 commercial EMS helicopter crashes that occurred between May 11, 1978, and December 3, 1986, the National Transportation Safety Board noted: "While it is difficult to substantiate, it is reasonable to believe that many of these accidents could have involved pilot fatigue as a contributing factor."[16] Other than the Maryland State Police operation, before 1987 no EMS helicopter program used more than three crews to staff 24-hour-per-day operations. At the end of that year, over 50 percent of such operations had staffing patterns of four or more crews for each aircraft.[22]

The strategic location of helicopter bases throughout Maryland provides backup services as needed. The multiple uses of Med-Evac helicopters, as described earlier, provide variety in the responsibilities of flight crew members. These factors reduce the stress and fatigue that have been reported by crews in hospital-dedicated single-mission systems.

*Competition* Competition among hospitals for patients transported by air is eliminated in Maryland by categorization. Med-Evac missions are dispatched by the Systems Communications Center (SYSCOM) according to the echelons-of-care concept and established specialty consultation protocols. The public service system is therefore oriented to patient transport from the scene of accident to the most appropriate definitive care center.[23]

The first hospital-based helicopter program in the United States started in 1972.[24] By 1985, over 100 such programs had been established.[25] The number increased by 10 percent during 1987. During that year, 18 new programs began while 4 ceased to operate. The net gain of 14 brought the total number of hospital-based programs to 149.[26] This growth has fostered competition, which is fierce at times, for patients and the revenue that their care generates.[6,19,27,28]

*Costs* Because the MSP Aviation Division fulfills a variety of responsibilities, resources are shared among various agencies, and expensive equipment, services, and personnel are not duplicated.

The cost of one Med-Evac mission in Maryland in 1985 was $603.50; the national average for a hospital-based mission was $1,000.[28,29] The annual cost of operating a hospital-based helicopter is estimated to be $1,000,000.[30]

In Maryland, a Med-Evac mission averages 51 minutes, within the "Golden Hour."[31] The location of helicopters near population centers throughout the state is a major contributing factor to the achievement of this rapid transport time.

A hospital-based helicopter flies an average of two or three missions per day,[7,19] with an average flight time of less than two hours per mission.[29] Therefore, these vehicles are used only about six hours per day, or at 25 percent of capacity. This correlates with the recovery of only 25.7 percent of annual direct operating costs of these systems from patient transport charges.

Insurance premium costs for the Maryland Med-Evac system are comparatively lower because the service is provided by a highly disciplined police organization.

## Conclusion

The regionalized Med-Evac helicopter program in Maryland provides life-saving transportation to critically ill and injured people in the state. The Maryland emergency medical services system is designed to minimize transport time and to deliver patients to the medical facility most appropriately staffed and equipped to meet their treatment needs. A review of the helicopter program during its first 18 years of operation demonstrates that this public service is being provided in a safe and efficient manner.

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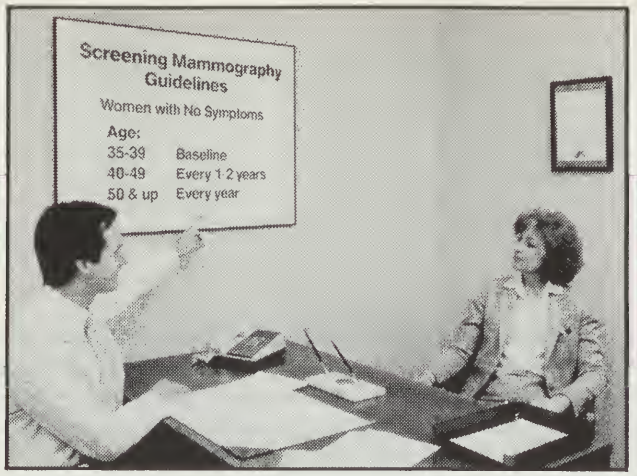
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# Acute Management of Cervical Spinal Cord Injury

*FRED H. GEISLER MD, PhD*

**Treatment of cervical spinal cord injury is controversial in terms of the type and timing of medical and surgical therapy. Attention to initial resuscitation, the use of vasopressor agents during the first 72 hours following injury, and critical care management to prevent complications that contribute to morbidity form the fundamental care plan for the victim of spinal cord injury. The focus now is on improving neurologic outcome.**

Approximately 200,000 people in the United States have spinal cord injuries (SCI), and approximately 20,000 new injuries occur annually; most of the new victims are between 18 and 30 years old. The lifetime cost of paraplegia for such a patient can exceed a million dollars in medical support and lost wages. The mechanism of injury, mechanical damage, and clinical spectrum of SCI vary greatly. Some injuries involve massive transverse mechanical disruption of all neurologic tissue in the spinal cord; it is unlikely that any medical, surgical, or pharmacologic intervention can improve neurologic recovery and prevent lifelong disability in these instances. However, in most cases, the mechanical injury to the spinal cord is more limited, and a portion of the nervous tissue damage appears to result from secondary processes, for example, the local biochemical derangements or the systemic hemodynamic consequences of the injury. These secondary processes can be alleviated by medical or surgical therapy. Antagonists of the endogenous opioid peptides (such as naloxone and thyrotropin-releasing hormone [TRH]) are promising new agents for the pharmacologic resuscitation of the injured spinal cord and ultimately may be shown to improve the neurologic outcome following SCI.[1]

Although treatment of spinal cord injury varies from the North American preference for early stabilization to the European preference for a nonsurgical approach, neither approach has been proved scientifically better. Despite differences in the specific medical and rehabilitative protocols used, superior results seem to occur at high-volume, specialized centers that have multidisciplinary teams consisting of experienced physicians, nurses, and paraprofessionals managing the care phases from initial diagnosis and acute treatment through rehabilitation and long-term follow-up of complications secondary to the injury and/or pathologic processes at the injury site.

As the statewide referral center for SCI, the Shock Trauma Center of the Maryland Institute for Emergency Medical Services Systems (MIEMSS) admitted 230 spinal-cord-injured patients during the 1986 fiscal year; of these, 149 had cervical spinal injuries. Of the 230 patients, 113 patients had a neurologic deficit: 49 being neurologically complete and 64 with one of the incomplete spinal cord syndromes. One hundred ten surgical procedures were performed on these patients for decompression and stabilization. The acute physiologic management and rapid reduction of cervical fractures follows established, but continuously evolving, protocols that have not yet undergone the scrutiny of randomized prospective studies. However, MIEMSS clinicians believe the protocols used at our institution not only provide the best initial physiologic management but also may improve the patient's neurologic outcome if initiated within 6 to 8 hours postinjury.

## Care Phases

The diagnosis and acute management of SCI can be divided into six separate phases: initial assessment and immobilization, medical management, anatomic alignment, radiologic diagnostics, surgical decompression, and stabilization.[2-6]

*Initial Assessment and Immobilization* The first care phase begins in the field. Prehospital personnel identify patients with possible SCI by utilizing a high index of suspicion and an initial field screening and neurologic examination for motor and sensory deficits in all four extremities. Following a protocol-based procedure for splinting and immobilizing the spine they then place the patient on a backboard with his/her head and neck immobilized in a neutral position with appropriate devices such as a cervical collar and tape. The major goal during this field management is to reduce the risk of neurologic deterioration from repeated mechanical insults to the spinal cord; flexion of the neck offers the greatest potential for additional damage.

However, maintenance of an airway and adequate ventilation during assessment and transport must supercede the goal of total neck immobilization; reluctance to move the neck of a patient with an identified or possible SCI with respiratory embarrassment may result in inadequate ventilation and eventual respiratory arrest. In response to this apparent dilemma, many emergency medical service protocols include field or immediate emergency room intubation of a patient with

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identified airway compromise. When the patient requires intubation, in-line manual traction often facilitates rapid placement of the endotracheal tube without overly compromising the spinal cord's immobility.

*Medical Management* The second care phase involves the medical support necessary to reverse the physiologic changes that occur acutely as a consequence of cervical spinal cord injury. A severe cervical spinal cord injury, as evidenced by a major motor and sensory deficit below the level of the injury, physiologically interrupts the outflow of the entire sympathetic nervous system as it passes through the cervical spinal cord before it exits in the thoracic region. This interruption causes loss of vascular tone and of the body's ability to accelerate the heart rate, which in turn results in the body's inability to maintain normal blood pressure. Patients in neurogenic shock typically present with hypotension and bradycardia, a state differing from that of hypovolemic hypotension associated with blood loss from other injuries because of the absence of tachycardia. The hypotension associated with the neurogenic shock of SCI usually can be reversed with a small dose of dopamine (3 to 5 $\mu$g/kg/min), which can be adjusted to maintain a mean blood pressure of 80 to 90 torr in a previously normal, young, healthy individual. (See details of this care phase below.)

*Anatomic Alignment* The third phase involves reestablishing bony alignment of the spinal column to remove any direct mechanical compressive forces on the spinal cord or roots that could increase pressure in the local neurologic tissues; in almost all cases, this goal can be accomplished with Gardner-Wells cervical traction or Halo vest immobilization. MIEMSS neurosurgeons believe that relieving this pathologically increased tissue pressure within hours of injury, along with the treatment of neurogenic shock, enhances tissue perfusion at the site of spinal cord damage and may well improve ultimate neurologic outcome.

*Radiologic Diagnostics* The fourth care phase involves detailed, diagnostic radiologic procedures to define the bony damage and to verify decompression of the spinal cord and all nerve roots. Most patients at our institution undergo cervical myelogram via a C1-C2 puncture with a water-soluble contrast agent, followed by a high-resolution computerized tomography (CT) scan that includes sagittal reconstructions. Occasionally, magnetic resonance imaging (MRI) is used to supplement the initial radiologic evaluation. The CT-myelogram provides superb bone detail of the fracture site and the anatomic relation of fractured or dislocated fragments to the spinal cord, whereas MRI occasionally provides better images of anterior disc, posterior ligamentum flava, or spinal cord contusion.[7]

*Surgical Decompression* The fifth phase comprises an emergency surgical decompression of any mechanically compressed neurologic elements disclosed by the radiologic studies that were not decompressed by the anatomic bony alignment procedure of phase 3. The majority of the cases are bilateral locked facets that cannot be reduced with traction.

*Stabilization* The sixth and final care phase relates to mechanical stabilization of the spinal column to obtain vertical stability and to prevent reinjury of the spinal cord from repeated movement of the unstable bony elements. The stabilization technique is individualized for each fracture and its expected instability. The techniques include internal stabilization, external splinting, and prolonged cervical traction.

These six steps strive to accomplish the following in the acute management of a patient with cervical spinal cord injury:

- provide initial cardiopulmonary management, immobilization, and careful transportation in order to deliver the patient with the least possible SCI
- enhance blood flow to the injured spinal cord both by reversing initial systemic hypotension and by decreasing any increase in spinal cord tissue pressure secondary to mechanical compression by displaced bone or tissue
- prevent reinjury to the already injured spinal cord by mechanically stabilizing the unstable fracture/dislocation, allowing routine nursing care of the other injuries.

## Initial Neurologic Assessment

Motor and sensory functions in all four extremities need to be clearly documented at the time of injury as well as on admission to the medical facility to provide a baseline for determining subsequent neurologic deterioration or improvement. Any complaint of neck pain, back pain, or muscle spasm may indicate a spinal column injury without neurologic deficit. Patients with these conditions require serial radiologic and neurologic evaluations. If the cervical muscle spasm is severe and the neutral position radiologic studies demonstrate anatomic alignment, then flexion-extension lateral cervical radiographs are required several days postinjury to uncover any potential posterior ligamentous injury that can leave an unstable cervical spine when the muscle spasm subsides.

The neurologic assessment in SCI is derived from a

detailed motor and sensory examination. Of particular note are the pin sensations in the sacral dermatomes around the rectum and voluntary rectal tone. Their presence is synonymous with the presence of sacral sparing, which may be the only remaining neurologic function in an incomplete cervical spinal cord lesion. Its presence changes the patient category from complete to incomplete neurologic injury, an essential diagnostic distinction since many patients with incomplete lesions tend to have at least partial recovery of neurologic function, whereas those with complete spinal cord lesions, as a general rule, do not have significant neurologic recovery.

Consistency of spinal cord assessment is important, particularly in noting subtle changes in sensation and motor function. The American Spinal Injury Association (ASIA) has developed a motor assessment system that provides a numerical grading system to document improvement or deterioration in function.[8] It tests five key muscles in each limb and grades the motor responses on a scale of 0 to 5 (0 representing total paralysis and 5 representing normal function). The motor score is the sum of the strengths of all muscles (0 representing complete quadriplegia and 100 representing normal muscle function). Using this type of indexing, all patient care providers (including physical therapists and nurses) can accurately and consistently document patients' status.

## Initial Medical Management at MIEMSS Shock Trauma Center

Although treatment priorities for the multitrauma patient mandate management of life-threatening injuries as the first priority, the displaced spinal column often can be reduced rapidly with cervical traction and stabilized while any required multisystem work-up and surgery/treatment are ongoing.

*Goals* The initial management goals in SCI are to preserve the neurologic function present on arrival and to reverse the presenting neurologic deficits. All patients, despite the severity of the initial injuries, are presumed to have incomplete spinal cord injuries with a potential for recovery until serial neurologic examinations over 72 hours document irrecoverable motor and/or sensory loss.

The initial medical management goals include maintaining arterial blood gases and vital signs in the normal range. A patient presenting clinically with C5 quadriplegia requires close respiratory status monitoring (tidal volume, vital capacity, and/or negative inspiratory force). Such a patient often has adequate spontaneous breathing immediately after the injury but will then tire or undergo a change in neurologic level within 4 to 12 hours, requiring intubation and mechanical assistance for adequate ventilation. Serial monitoring of respiratory parameters provides early identification of these impending problems for appropriate intervention before a major respiratory crisis occurs.

*Patient and Incident History* A detailed history (from prehospital personnel and family members) is obtained both as a indication of mechanism of injury and for medicolegal implications. Knowledge of the type of traumatic incident (motor vehicle, motorcycle, diving, gunshot wound, or fall), thereby identifying the probable mechanism of injury, often assists in determining the type of injury. The most common mechanisms of injury that result in SCI include forced flexion (motor vehicle crashes or posterior blows), flexion with rotation (motor vehicle incidents), hyperextension (falls), and vertical compression (axial loading, diving accidents); these mechanisms can occur singly or in combination. Penetrating wounds from gunshots or stabbings can pierce the spinal cord, causing mechanical disruption of the spinal cord tracts; a bullet passing near the spinal cord can cause cord concussion, producing a transient or permanent neurologic deficit.

*Immediate Interventions* On arrival at the Shock Trauma Center, patients with cervical spinal cord injury are managed initially by a traumatology/anesthesiology team, which performs the initial resuscitation and multitrauma evaluation; this protocol-based system of medical management includes a lateral cervical spine radiograph (Figure 1) with at least one view showing inferior to C7.[5] (After a diagnosis of cervical fracture or SCI, the patient is typically maintained in cervical traction during the entire admission phase, including all radiologic studies.) Concurrently, consultations from the neurosurgery, orthopedic, and critical care teams are obtained. If a cervical fracture/dislocation or spinal cord injury is identified, a complete radiologic investigation of the entire spinal column is performed in addition to the lateral cervical spinal x-ray.

Two large-bore intravenous catheters, a Foley catheter, and a nasal gastric tube are inserted in each SCI patient for evaluation and management; a Swan-Ganz catheter is also inserted in a SCI patient with neurologic deficit. Baseline laboratory work-up includes a complete blood count, electrolytes, amylase, clotting profile, type and cross, urinalysis, arterial blood gas, and electrocardiogram.

In addition to diagnosing spine and/or cord injury, the goal of the initial diagnostic work-up of the patient with multiple trauma is to identify other life-threatening injuries, including those involving the brain, the

chest, and the abdomen. Such injuries, which are often occult,[9] can be identified rapidly using a few diagnostic maneuvers. In addition to a physical examination and a lateral c-spine roentgenogram, chest and pelvis roentgenograms are obtained. A head CT scan and a diagnostic peritoneal lavage or CT scan of the abdomen complete the initial diagnostic assessment of the patient sustaining blunt trauma insults.[5,10] Usually, patients with cervical spinal cord injuries as a result of motor vehicle or industrial incidents have multisystem injuries, whereas victims of diving injuries do not.[5]

If a cervical fracture/dislocation is identified and is potentially reducible with traction (as the majority are), Gardner-Wells or Halo traction is applied and a rapid bony reduction/realignment with progressively increasing weights under radiographic control is performed. After obtaining optimal closed reduction of the cervical fracture/dislocation, as determined by x-ray film, a C1-C2 Iohexol myelogram is performed (Figure 2), followed by a CT-myelogram. The initial reduction is performed on a Stryker frame, and the patient undergoes CT scanning on a Sukhoff transportation device, thus minimizing the likelihood of additional mechanical damage to the spinal cord during the diagnostic-resuscitation phase of the care and ultimately improving neurologic outcome. Bone and soft tissue compressing the spinal cord or roots, as determined by the CT-myelogram, are surgically removed on an emergent basis, at which time internal stabilization and fusion are also performed.

*Secondary Interventions* Patients without mechanical compression of nervous tissue on the CT-myelogram



**Figure 1.** Initial lateral cervical radiograph demonstrating a C6-C7 fracture-dislocation with the body of C6 displaced anterior and then inferior to the body of C7. Also evident are extensive fractures of the posterior element of C6.



**Figure 2.** After reduction with cervical traction, the CT-myelogram demonstrates free flow of the water-soluble intrathecal dye (introduced by C1-C2 puncture) past the fracture-dislocation site.

are maintained with external stabilization until internal stabilization (Figure 3) is performed or definitive external stabilization (for example, Halo vest or Yale brace) is applied, typically one to two days postinjury unless other injuries preclude cervical surgery. Since rapid stabilization of unstable cervical spine fractures allows safe, early mobilization, it also decreases medical complications secondary to immobilization.

During the first 72 hours following SCI, the patients receive a "hemodynamic push," in which the mean arterial blood pressure is maintained between 80 and 90 torr with the cardiac output maintained in a normal to high-normal (1.5 times the normal output) range. Inotropic support with dopamine or dobutamine is usually necessary to attain these physiologic goals of medical support. The hemodynamic push is believed to enhance spinal cord perfusion during the neurogenic shock state, which begins at the time of the injury. The cardiovascular parameters are carefully monitored and maintained throughout induction of anesthesia and during surgery in those patients requiring early spinal decompression or stabilization or during any emergency surgery necessary within the first 72 hours following injury. Each SCI patient receives a short course of steroid therapy (a 250-mg IV bolus of methylprednisolone followed by 125 mg of methylprednisolone every 6 hours for 72 hours). Although there is controversy as to the role of steroids in decreasing spinal cord edema, they may be helpful in treating the secondary ischemic events immediately following the initial injury.[11]



**Figure 3.** Anterior internal stabilization with the Casper screw and plate technique. Note the iliac crest bone plug between C6 and C7 to obtain lifelong bony fusion at the fracture-dislocation site.

Clinicians must temper their expected ultimate outcome goals from spinal cord resuscitation and rapid spinal cord alignment with the realities of neurologic injury. Spinal cord injury, like head injury, can be divided into primary and secondary damage. The primary neurologic damage is destruction of tissue from either mechanical or ischemic insult between the time of the injury and initial medical care; it results in a permanent neurologic deficit. Although there is currently no way to alter this damage, nerve grafting in the future may be able to bridge the damaged spinal cord segment. Secondary damage to the spinal cord occurs after the insult and is caused by a combination of delayed swelling, continuous mechanical reinjury to the injured spinal cord segment, anoxia, low perfusion to the injured spinal cord segment, and/or release of endogenous factors (for example, free radicals, catecholamines, arachnoidal acid metabolites, changes in glucose utilization, oxygen utilization, and calcium flux) during the first hours after the insult.[11]

Antagonism of these factors could limit the extent of the secondary injury and improve the ultimate neurologic outcome—ideas currently under investigation. For example, a randomized, prospective, double-blind study to test the efficacy of GM-1 ganglioside (an important neuronal component) in ameliorating secondary injury and improving ultimate outcome is nearing completion at our institute. Elsewhere, multiple animal experiments on SCI have demonstrated that endogenous opioids are released following trauma to the spinal cord, contributing to delayed injury of the damaged spinal cord tissue by reducing microcirculatory blood flow, among other effects. If this theory is correct and can be extrapolated to clinical situations of traumatic SCI in humans, then endogenous opioids contribute to the posttraumatic ischemia and tissue damage characteristic of traumatic spinal cord injury. Promising results have been achieved with the use of naloxone, an endogenous opioid antagonist, in animal studies involving spinal cord injury. TRH acts *in vivo* as a partial physi-

ologic antagonist of endogenous opioids, appears to block the secondary damage to the tissues following spinal cord injury, and is currently the most promising new agent in the attempt to improve ultimate neurologic outcome.[1,11]

Pathophysiologically, when the spinal cord is injured by either mechanical or ischemic insult, the damaged area begins centrally in the gray matter and spreads centrifugally outward as the force of the impact increases. Within the first 15 to 30 minutes, the central gray matter is disrupted and small hemorrhages appear. This damage appears to be primary and thus irreversible. However, the peripheral white matter tracts are a low metabolic demand region and their ultimate demise may take hours to a few days. Animal experiments of SCI indicate that spinal cord blood flow is a predictor of viability in that the subjects with increased blood flow in the white matter tended to recover, whereas those with decreased blood flow in the white matter go on to physiologic transection of the spinal cord.[4] The pathophysiologic spinal cord changes located centrally in the animal experiments have been verified by the imaging techniques of CT scan, MRI, and interoperative ultrasound at our institution.[12]

## Conclusion

The treatment of cervical spinal cord injury remains controversial in terms of the type and timing of medical and surgical therapy. Basic physiologic support combines mechanical reduction/stabilization of the bony instability. This appears to allow the greatest chance for maximal recovery of neurologic function. Attention to initial resuscitation, the use of vasopressor agents during the first 72 hours following injury, and critical care management to prevent complications that contribute to morbidity form the fundamental care plan for the victim of SCI. Research has now turned its focus to improving neurologic outcome. Pharmacologically active agents such as GM-1 ganglioside and opiate antagonists may be demonstrated in clinical studies to yield superior neurologic outcome following spinal cord injury.

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# The Trauma Anesthesiologist

*CHRISTOPHER M. GRANDE MD, JOHN K. STENE MD, PhD, and CHARLES R. BARTON CRNA*

**An anesthesiologist with supplemental knowledge and skills in traumatology, emergency medicine, and critical care is a concept whose time has come. At a trauma center, the Trauma Anesthesia/Critical Care Specialist (TA/CCS) performs unique functions compared with other medical specialists and anesthesia subspecialists. Analysis of the significant differences between the trauma patient population and other groups of patients indicates the need for a dedicated anesthesiologist, specializing in traumatic disease, to be a member of the trauma team.**

It is only recently that trauma, as a specific disease entity, has received the attention it deserves. Traumatic injury accounts for the greatest proportion of deaths between the ages of 1 and 38 years.[1] Trauma ranks fourth as the cause of death in all age groups, surpassed only by malignancy, cardiovascular disease, and stroke. Recognition of the these facts by the medical community, governments, and the general public has caused trauma to become associated with such terms as "the disease of the twentieth century," "therapeutic vacuum," and the "neglected disease of modern society."[2,3] In fact, now trauma may be correctly classified as epidemic.[4] Trauma has become a "hot ticket" for all health care delivery industries (medicine, nursing, emergency services) as the finding that dedicated trauma care lowers the morbidity and mortality due to injury has been well established.[5] Because our modern lifestyle seems to promote violence and injury, the need for high quality trauma care is projected to increase. Civil violence (such as terrorist acts) and injury (related to increased numbers of handguns and higher speed limits) surely will continue to increase the incidence of trauma.[4]

## Anesthesiologist's Role

An emerging concept in dedicated trauma care delivery is that of a physician whose basic postgraduate training is in anesthesiology and who devotes a majority of his or her professional efforts to the care of trauma victims. Since such care does not begin or end in the operating room (OR), specialization in critical care is also part of the required expertise. This has led to the development of the terms "Trauma Anesthesia/Critical Care Specialist" (TA/CCS) and "Trauma Anesthesiologist."

Although early TA/CCSs learned by doing, specialized fellowships in trauma anesthesiology and critical care are now offered at a few select centers. The first was offered at the specialized Shock Trauma Center of the Maryland Institute for Emergency Medical Services Systems (MIEMSS). Specific responsibilities of an anesthesiologist with the appropriately supplemented training are being delineated within trauma centers (TCs). For example, at the MIEMSS Shock Trauma Center it is protocol that a TA/CCS attached to the trauma team is the first person to receive the trauma patient being delivered by helicopter or land ambulance. Elsewhere in the United States, the abilities of the TA/CCS are used to transport the seriously ill from the field to the TC or from one center to another aboard specially equipped aircraft.[6]

Guidelines developed by the Joint Commission on Accreditation of Hospitals require that for a hospital to be designated a level 1 TC (the highest level of care) 24-hour in-house coverage by anesthesiologists trained specifically in trauma must be provided.[7,8] A small cadre of TA/CCSs exists in the United States. These specialists are involved in the education of dedicated trauma care providers.

In May 1988 the MIEMSS Anesthesia Department sponsored the First Annual Trauma Anesthesia and Critical Care Symposium, a significant milestone in the development of professional recognition of TA/CCSs. Inevitably, a formal society of dedicated TA/CCSs will form. Thus, within the United States, the anesthesiologist, as the TA/CCS, has begun to assume a rightful role alongside the traumatology surgeon to combat traumatic disease.

Retrospectively, these developments are only logical. Cardiac patients are treated by a group of medical specialists who devote most of their time to the management of those diseases: cardiologists, cardiac surgeons, and cardiac anesthesiologists. Similarly, there are neuroanesthesiologists, pediatric anesthesiologists, obstetric anesthesiologists, and anesthesiologists who devote most of their time to critical care medicine.

Perhaps part of the reason for the delayed development of the TA/CCS within the United States is that trauma traditionally has been considered a surgical disease. In stark contrast, European care of the trauma patient is directed in all stages by an anesthesiologist

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or a specialist whose basic postgraduate training is in anesthesiology. The so-called Anesthesia and Resuscitation, Anesthesia and Critical Care, and Anesthesia and Reanimation Departments supervise the administration of emergency medical services (EMS) both inside and outside the hospital and are responsible for the education of paraprofessionals.[9–11] In 1962, the chief of anesthesia at the Birmingham Accident Hospital in England wrote

> It is contended that the anaesthetist can usefully become a fully integrated member of the team treating injured patients, not only in the operating theatres, but in the management of respiratory and circulatory problems; in resuscitation; in the relief of pain; and in a number of diagnostic and therapeutic procedures in which the techniques of anaesthesia can be helpful.[12]

The TA/CCS often directs the perioperative care of the critically injured, because this specialist is the *only* person qualified to perform this combined anesthesia/critical care function both in *and* out of the operating room. This is reasonable, since anesthesiology is the perioperative medical management of the surgical patient. If one considers that as many as 90 percent of trauma patients initially do not require a surgeon, then the anesthesiologist who has received specialized training in intensive care medicine, trauma management, and field medicine is a key "Life Support Physician."[13,14] As stated by R Adams Cowley MD, a pioneer in traumatology and Director of MIEMSS,

> hypoxia, the destroyer of all life, insidiously tears down the biochemical energy-transducings systems so necessary for survival. Therefore, the message is to prevent hypoxia; maintain ventilation, control the hemorrhage, and maintain optimal tissue perfusion.[15]

The anesthesiologist has an intimate, ongoing interest in preventing hypoxia and providing optimal tissue oxygenation.

### Formalized Training for TA/CCS

What sort of training, education, and experience must the TA/CCS possess to perform optimally? The same basics required of other physician anesthesia practitioners are needed: a clinical base year (internal medicine, surgery, pediatrics, obstetrics/gynecology, or flexible internship), followed by two to three years of clinical anesthesia training with exposure to a wide range of patient populations and techniques. This should include adequate experience with neurological, cardiothoracic, pediatric, and general surgery cases under controlled, elective conditions. There also should be exposure to the trauma surgeries admitted to the particular teaching hospital. A significant proportion of the time must be spent in intensive care settings, where valuable experience with the various aspects of critical care medicine can be acquired. Coronary care, medical, surgical, neurosurgical, cardiothoracic, pediatric, and neonatal intensive care units (ICUs) are excellent training grounds.

At the end of this basic training, candidates interested in pursuing a career as a TA/CCS should be comfortable with giving a general or regional anesthetic, should be proficient in the placement and interpretation of various invasive hemodynamic monitoring systems, and should possess a solid foundation in advanced techniques of airway management and the principles of cardiopulmonary-cerebral physiology. At this point, the trainee should seek a fellowship in trauma anesthesia and critical care at a major trauma center. Only at a TC will the TA/CCS trainee find the volume of experience required to become proficient. Factors influencing this choice should include (1) the political climate for anesthesiologists at the TC (for example, relations with surgeons), (2) the functions and responsibilities the TA/CCS will assume, and (3) the quality and sophistication of both the EMS associated with the center and the facilities within it (admitting area, operating suites, and critical care areas).

During the fellowship, the novice TA/CCS will become comfortable with advanced resuscitation/stabilization techniques and more expert in airway management and critical care of the trauma patient. Important therapeutic skills include the use of vasoactive infusions, invasive cardiac monitoring, state-of-the-art respiratory therapy modes (for example, high frequency and independent lung ventilation), and nutritional support. The fellow must gain conceptual knowledge of traumatology and emergency medicine, including certification in advanced trauma life support (ATLS) by the American College of Surgeons, Committee on Trauma, and involvement with the EMS or field programs.[16,17] Additional training might include elective time spent in hyperbaric medicine, infectious disease consultation, or research. At the end of the fellowship, the TA/CCS should be capable of performing all the basic and advanced functions listed in Table 1.

In this country, there has been recent speculation among the well-established TA/CCSs and other traumatologists (particularly emergency medicine physicians) regarding the future training programs of both specialties. From an anesthesiologist's perspective (especially compared to European preparation), TA/CCS trainees lack formalized, high-quality, large-volume exposure to particular aspects of a large part of emergency medicine practice. Specific examples include performing diagnostic peritoneal lavage, emergency thoracotomy for open cardiac massage, and field experience.[18,19] On the other hand, most emergency medicine specialists recognize their training programs lack sufficient expo-

sure to sophisticated airway management (including the use of various techniques, equipment, and pharmacological adjuncts), intraoperative management, and postoperative critical care training.

Thus, it has been proposed that after completing required training in their specialty, trainees undertake further training in the other track, possibly becoming board certified in both specialties. For example, the TA/CCS, after completing his or her fellowship, would begin training in an emergency medicine program; conversely, an emergency medicine specialist would undergo anesthesia training. Because both types of participants have completed internships and have several years' clinical experience to gain factual knowledge and manual dexterity, additional training time could be abbreviated. Physicians completing such extensive, rigorous training are prepared for the extreme. This is especially true considering that, although the emergency room of one TC evaluated over 60,000 patients one year, fewer than 1 percent of those patients required OR resuscitation.[20]

### TA/CCS vs. Other Subspecialty Anesthesiologists

Because of the pathophysiological and epidemiological peculiarities of different patient populations and the specialized equipment and techniques necessary to optimize their management, there are various subspecialties of anesthesiology (for example, cardiac anesthesia). The newcomer to this collection is trauma anesthesia. Table 2 shows the characteristics of the trauma patient population and its management.

Traumatic disease from motor vehicular incidents, which accounts for the largest portion of traumatic deaths, has a characteristic occurrence pattern. The number of vehicular incidents peaks in July and August and remains at an elevated rate until January and February, when they occur at the lowest rate. Serious motor vehicle crashes occur with greater frequency on weekends and at nights. The greatest rate of admissions from motor vehicle incidents occurs between midnight and 1 a.m. on Sunday. Although data from vehicular incidents are more complete than for other types of trauma, the MIEMSS experience suggests that all trauma peaks on weekend nights in the summer.

"Trauma anesthesia" and "emergency anesthesia" can be mutually exclusive terms. All emergency anesthetics performed do not involve trauma, and all traumatic injuries do not have to be handled emergently, but there is some overlap. At the MIEMSS Shock Trauma Center, we have found that trauma is a disease that usually requires anesthesia as part of its treatment.

Trauma patients frequently have multiple system injuries, including brain injury causing coma. In fact,

**Table 1. Characteristics of the Trauma Anesthesia/Critical Care Specialist**

Mandatory

- Experienced with a large repertoire of general and regional anesthesia techniques for emergency and elective trauma cases
- Expert in all forms of airway management, especially in emergency situations
- Expert in resuscitation procedures (peripheral and central venous line placement, fluid management)
- Able to perform functions under adverse conditions and diverse locations (for example, in transport vehicles, on helipads)
- Expert in diagnosis of crucial traumatic conditions (cervical spine fractures, pneumothorax)
- Able to perform simple surgical procedures (cricothyroidotomy, intercostal thoracostomy)
- Familiar with a wide range of specialized trauma care equipment (for example, Rapid Infusion System)
- Comfortable with the range of critical care medicine doctrine and management
- Involved in providing postoperative analgesia (continuous epidural catheters) in various hospital environments (ICU)
- Background in the theory of traumatology and emergency medicine
- Knowledgable in use of methodologies to assess clinical trends (Glascow Coma Scale, Trauma Score)

Desirable

- Able to perform more advanced surgical procedures (for example, diagnostic peritoneal lavage, emergency thoracotomy)
- Experience in hyperbaric oxygen therapy
- Involved directly with emergency medical services
- Active in trauma prevention programs

**Table 2. Trauma Patient Population Characteristics and Perioperative Management**

- Peak incidence: summer (July), weekend (Saturday), night
- Often presents with a disease constellation (for example, unconsciousness, increased intracranial pressure, hypoxia, and hypercarbia)
- Patient identification/history often unknown
- Large involvement of ethanol and/or other intoxicants
- "Full stomach" airway considerations
- Lengthy OR procedures: multiple/serial/simultaneous, diagnostic/therapeutic
- Frequent development of iatrogenic side effects (for example, complications of massive transfusion)
- Intraoperative anesthetic management often only "supportive" (that is, administration of oxygen and muscle relaxant)
- Wide range of advanced intraoperative management techniques often necessary (for example, independent lung ventilation)
- "Critical care" performed in the OR
- High level of medicolegal problems

the pathophysiological response to a specific injury is often more extensive than the anatomical injury. For example, unconsciousness due to a head injury may signify the presence of raised intracranial pressure, metabolic abnormalities like hypoxia and hypercarbia, or other disease entities like aspiration or toxicological overdose. Penetrating thoracic injury can represent an intracardiac defect, but it also may be associated with prolonged shock, which ultimately may have greater associated consequences. The patient's medical, surgical, anesthetic, and social histories; previous use of medications; and allergies often are unknown: an appropriate work-up usually is not feasible. In most other anesthesia subspecialties, the patient has been "optimized" prior to the procedure; in trauma, the exact opposite often is true. The TA/CCS often does not have the option to postpone surgery. Additionally, perhaps more than 50 percent of trauma admissions involve the use of ethanol and/or some other intoxicant, which may alter the patient's response to the trauma itself or to the anesthetic.

Also unique is the way trauma management proceeds.[21] In other subspecialties, the patient is first interviewed (or at least the patient has been identified and the history has been documented), findings assessed, and then a plan formulated. In trauma, all this must be performed simultaneously and continuously updated "on the run." Thus, strict protocols have been constructed to ensure adherence. Trauma evaluation tools such as the Glasgow Coma Scale and Trauma Score are greatly relied on; thus, the TA/CCS must be familiar with them and facile in their use.

In terms of airway problems (including facial and cervical trauma), the "full stomach" is always an underlying consideration. There is usually no time for "fancy" airway management maneuvers such as the use of a fiberoptic bronchoscope for awake-sedated intubation.

The TA/CCS may be called on to begin intravenous lines, to perform cricothyroidotomies and vascular cutdowns for line placement, or to insert chest tubes or other invasive modalities for rapid fluid infusion or monitoring under very stressful circumstances.[21]

A study of the natural history of most severe trauma reveals that patients are in their best overall condition when they first enter the system and will proceed to "get worse before they get better" over the ensuing weeks and months. This is often due to the subtle metabolic consequences of associated conditions of trauma such as traumatic shock, adult respiratory distress syndrome, and sepsis. Thus, because of the early "therapeutic window," the approach at the MIEMSS Shock Trauma Center is to perform all possible surgical procedures at the time of initial surgery.

Performing procedures early also contributes to the long-term well-being of the trauma patient. For example, early fixation of a fracture will provide greater comfort and permit earlier mobilization of the patient. Therefore, the TA/CCS frequently may provide extensive, intraoperative critical care during a very long OR course (sometimes in excess of 24 hours) during which multiple/serial/simultaneous surgical procedures are being performed on a relatively "unstable" patient, with no opportunity to cancel the case. The complex calculations that make up, for instance, the oxygen consumption index ($VO_2I$) are used as guidelines for therapeutic goals.

Trauma surgery may involve complicated intracranial surgery, intrathoracic/cardiac surgery (with the use of double-lumen endotracheal tubes, independent lung ventilation, or complete/partial cardiac bypass), reconstructive/plastic surgery, multiple-site orthopedic surgery, or the more routine intra-abdominal or general surgeries. All the anesthetic problems associated with these types of surgeries must be routinely handled: massive transfusions and their consequences, hypothermia, and so on.

Because of the tenuous state of the trauma patient, the intraoperative "anesthetic" management often does not involve agents that provide anesthesia specifically (that is, narcotics, inhalation agents) but instead only oxygen and muscle relaxants. Therefore, the incidence of intraoperative recall may be unusually high (perhaps greater than 40 percent).[22] While the TA/CCS is struggling with all the other presenting problems, he or she also is attempting to provide a safe level of amnesia to the patient. Additionally, the array of specialized trauma equipment with which the TA/CCS must be familiar, such as the Rapid Infusion System (Haemonetics Corp., Boston, MA), continues to grow.

It is common for the TA/CCS to provide mobile coverage for the patient within the hospital, for example, during trips to diagnostic areas such as the computed tomography and angiography suites. To be expected at these times are problems related to monitoring and the stability of the critically ill patient being moved (ventilatory and hemodynamic support).[23] For extremely unstable trauma patients, anesthetic coverage may have to be provided at remote areas (like the trauma ICU), because the patient absolutely cannot be moved.

Postoperatively, the TA/CCS may be found working in the trauma ICU or routinely providing postoperative analgesia in the form of regional techniques (epidural and intrapleural catheters). Another example is the serial intravenous sedation/dissociative (ketamine) technique given for dressing changes of burn victims.

Medicolegal problems concern the TA/CCS since

trauma patients present several risk factors: no patient choice for a physician, poor prognosis for trauma, no time to develop patient-physician rapport, and increased risk of anesthetic complications. As a by-product of the way trauma presents as a disease and the way it must be dealt with, there is great reliance on the entity of the trauma team. Because of the benefits the trauma patient can derive by having a TA/CCS in early attendance, an anesthesiologist must meet the field transport vehicle (helicopter or ambulance) when it first arrives to assess the patient as soon as possible and render definitive airway/resuscitative management. Due to the complexity of treating trauma patients and because anesthesia personnel are so desperately needed throughout the entire trauma system, the TA/CCS works closely with the other members of the trauma anesthesia team, consisting of a certified registered nurse anesthetist (CRNA) and the fellow.[24,25] Qualified CRNAs selected to work at the MIEMSS Shock Trauma Center undergo a special period of orientation as part of a preceptorship program. This program introduces the CRNA to the special knowledge and skills vital to the trauma anesthesia team members.

There is no room for "turf wars": the TA/CCS works beside the trauma surgeon for the ultimate benefit of the patient. Like the trauma surgeon, the TA/CCS must be familiar with the pathophysiology and subsequent management of a large range of traumatically induced diseases. These include penetrating and blunt trauma of the thorax, abdomen, extremities, and head; burns and inhalation injuries; hypothermia due to exposure and drowning; and fat embolism and the fat embolism syndrome. It is probably more important for the TA/CCS to have a thorough knowledge of traumatic surgical disease than other anesthesia subspecialists have of their respective disease repertoire because time constraints limit the amount of verbal communication that can take place. The TA/CCS must anticipate problems before they occur, for example, the development of a tension pneumothorax.

## Goals

The TA/CCS has begun to play a prominent role in the day-to-day care of trauma patients. In several areas, the TA/CCS either can enlarge the contributions being made or can start having an impact in both civilian and military spheres.

The first and most important contribution of the TA/CCS always must be in the clinical sphere as a member of the trauma team. As the scope and complexity of surgical procedures involved in trauma care increase, the anesthesiologist must be able to cope with the new demands for expertise in assisting with the diagnosis and treatment of many aspects of trauma. This expertise will continue to be needed in the OR and, probably to an increasing extent, out of the operating suites.

Second, as the TA/CCS continues to move out of the OR and into other areas of the hospital, duties outside the hospital also must be assumed. For example, the TA/CCS should lend support to the development and management of EMS.[17,26] Although in Europe the anesthesiologist commonly is found in the field, a recent study showed a low representation of anesthesiologists in EMS in this country.[27] The TA/CCS has much to offer the trauma patient who has not yet reached the trauma center; these services can be provided either personally or through agents in this area, emergency medical technicians and paramedics (physician-extenders).[28–31] One example includes the evaluation and safe use of analgesics in trauma care in the field, such as nitrous oxide/oxygen mixtures (Nitronox) or nalbuphine. Prominent specialists in regional anesthesia are advocating the administration of peripheral nerve blocks in the field and the training of paraprofessionals in the simpler of these techniques.[32]

In the role of teachers, the TA/CCS and anesthesiologists in general are performing poorly. There is still too much "hiding" in the OR behind a mask. One example is the training of paraprofessionals to intubate. In the past, paramedics would rotate through the anesthesia service of teaching hospitals to learn airway management. Because of the current medicolegal climate, many anesthesiologists are unwilling to teach these people.[33] If these individuals cannot learn necessary techniques from the experts under controlled conditions, where then should they learn? More anesthesiologists should become certified in Advanced Trauma Life Support and then go on to the instructor level.

A quick review of the research literature dealing with trauma reveals a paucity of material when compared with the amounts generated about other diseases. Within the medical profession, anesthesiologists have a great deal to make up for when one considers the amount of investigative work in trauma that has been done by surgeons.

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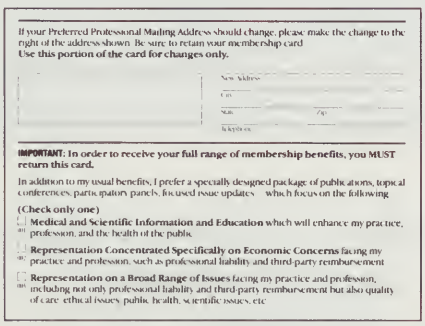
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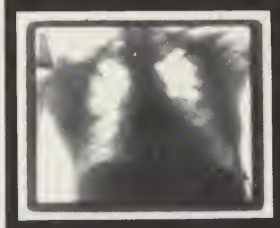
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## ALLAN J. HAMILTON, M.D.

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*Carcinogenesis, Mutagenesis, Impairment of Fertility*—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

*Pregnancy—Teratogenic Effects—Pregnancy Category C*—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

*Nursing Mothers*—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

*Pediatric Use*—Safety and effectiveness in children have not been established.

*Use in Elderly Patients*—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

*Hepatic*—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

*Cardiovascular*—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

*Endocrine*—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

*Hematologic*—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another $H_2$-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

*Integumental*—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

*Other*—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

**Overdosage:** There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous $LD_{50}$ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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# Update: Alcohol and Other Drug Use Among Vehicular Crash Victims

*CARL A. SODERSTROM MD and SUZANNE L. CARSON MBA*

**Alcohol abuse is a major factor in causes of vehicular crashes resulting in injury and death. At the Shock Trauma Center of MIEMSS, blood alcohol levels are obtained routinely from all trauma patients. In addition, tests are made for licit and illicit drugs. We found that alcohol use among all vehicular crash victims has decreased between 1980 and 1987.**

***17 killed in 13 days on state roads.***[1]

Alcohol abuse is associated with all types of trauma, particularly injury from vehicular crashes.[2,3] Zuska notes that the first traffic death occurred in 1898. Six years later the link between drunk driving and injury and death was documented in the *Quarterly Journal of Inebriety* by an anonymous author:

> We have received a communication containing the history of twenty-five fatal accidents occurring to automobile wagons. Fifteen persons occupying these wagons were killed outright, five more died two days later, and three died a few weeks after the accident, making twenty-three persons killed. Fourteen persons were injured, some seriously.... In nineteen of these accidents, the drivers had used spirits within an hour or more of the disaster. The other six drivers were all moderate drinkers....[2]

The problem of injury and death resulting from alcohol consumption and the operation of motor vehicles has yet to be resolved. A report by the National Commission Against Drunk Driving indicates that 46,056 people died in vehicular crashes in 1986.[4] Alcohol was a factor in 52 percent of those crashes. For the years 1980 through 1986, alcohol consumption was involved in 54 percent of the 321,043 deaths resulting from vehicular crashes.[4,5] Whitfield and colleagues[6] predict that "If exposure to existing injury sources is unchanged and unless more effective prevention countermeasures are employed," eight million Americans who were alive in 1980 eventually will die as the result of traumatic insults. Two million of these deaths will be caused by injuries sustained in vehicular crashes.

Each year, the majority of patients admitted to the Shock Trauma Center of the Maryland Institute for Emergency Medical Services Systems (MIEMSS) in Baltimore are vehicular crash victims. An admitting blood alcohol level (BAL) is routinely obtained at the time of admission. In addition, a battery of tests is performed for other licit and illicit drugs, including cocaine, methadone, methaqualone, and phencyclidine (PCP). Previous reports indicated the use of alcohol among trauma victims admitted to the MIEMSS Shock Trauma Center during the 1970s. Of all 565 trauma patients admitted in 1974, 236 (41.8 percent) tested positive for alcohol.[7] A BAL of 100 mg% or greater was noted in 26.7 percent or almost two-thirds (64.0 percent), of those with a positive BAL. A subsequent report[8] indicated the incidence of alcohol use specifically among vehicular crash victims treated during the years 1975 through 1977. Among 995 victims tested during that period, 480 (48.2 percent) had evidence of alcohol ingestion. In this group of patients, 37.5 percent, or more than three-quarters (77.7 percent) of those positive for alcohol, had a BAL of 100 mg% or greater.

This article is an update on alcohol and other drug use among vehicular crash victims admitted to the Shock Trauma Center.

## Testing Results

• *Alcohol* BALs were determined for 6,833 (93.3 percent) of the 7,326 vehicular crash victims admitted to the MIEMSS Shock Trauma Center during calendar years 1981 through 1987. The overall results from those tests for each year are presented in Table 1. One notes that 2,700 patients (39.5 percent) tested positive for alcohol. Almost three-quarters (74.0 percent) of those positive for alcohol had a BAL $\geq$ 100 mg%.

Alcohol consumption by age group and year of admission are shown in Figure 1. Linear regression analyses of alcohol consumption by age groups (<18 years, 18 to 20 years, 21 to 40 years, and $\geq$41 years) and according to year of admission were performed. From 1981 through 1987 there was a significant decrease ($p < 0.02$) in alcohol consumption for all the patients studied. For those 18 to 20 years old, there was no change in alcohol consumption. There were marginally significant decreases for those 21 to 40 years of age ($p = 0.069$) and those $\geq$41 years old ($p < 0.53$). A very significant decrease in the alcohol use rate was noted for those less than 18 years old ($p < 0.004$).

On July 1, 1982, a new law went into effect in Maryland, which raised the alcohol purchase age from 18 to 21 years. A "grandfather" clause allowed those who were 18 years old when the new law went into effect to continue to buy and consume alcoholic beverages (*Annotated Code of Maryland*, Article 27: Section 400A).

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**Table 1. Alcohol Consumption among Vehicular Crash Victims Admitted to the Shock Trauma Center, 1981–1987**

| Year | Number of Patients | Blood Alcohol Level | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | | 1–99 mg% | | ≥100 mg% | |
| | | Number | Percent | Number | Percent | Number | Percent |
| 1981 | 686 | 355 | 52 | 78 | 11 | 253 | 37 |
| 1982 | 827 | 492 | 59 | 95 | 12 | 240 | 29 |
| 1983 | 858 | 492 | 57 | 100 | 12 | 266 | 31 |
| 1984 | 915 | 529 | 58 | 83 | 9 | 303 | 33 |
| 1985 | 1,107 | 721 | 65 | 104 | 9 | 282 | 26 |
| 1986 | 1,152 | 711 | 62 | 126 | 11 | 315 | 27 |
| 1987 | 1,288 | 833 | 65 | 116 | 9 | 339 | 26 |
| Totals | 6,833* | 4,133 | 60 | 702 | 10 | 1,998 | 29 |

* 6,833 of 7,326 patients tested = 93.3 percent.

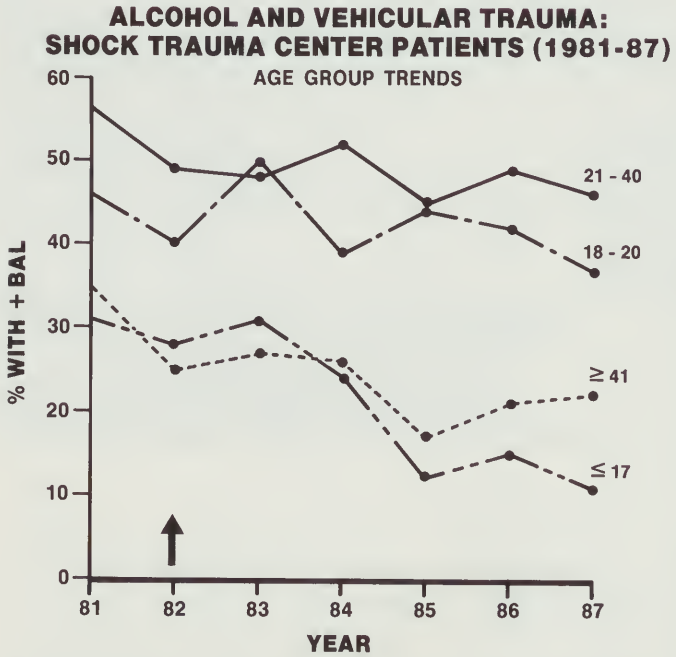



**Figure 1.** Percentage of vehicular crash victims for each of four age groups (≤ 17, 18-21, 21-40, ≥ 41) with positive blood alcohol levels (BALs) for the years 1981 through 1987. Those younger than 18 years demonstrated a significant decrease in alcohol use during the period ($p < 0.004$). The arrow indicates the year (1982) when the alcohol purchasing age was raised from 18 to 21 years of age.

Patient age groups were combined into two groups for study. Analysis revealed that those 18 to 40 years old demonstrated a significantly higher rate of alcohol consumption compared with younger and older patients throughout the study period ($t = 4.89$, $p < 0.001$). The drinking pattern of the two groups is depicted in Figure 2. Linear regression analyses indicated that alcohol consumption significantly decreased from 1981 through 1987 for both groups of patients, that is, those 18 to 40 years old and the group consisting of younger and older patients ($p < 0.03$ and $p < 0.02$, respectively).

• *Marijuana* Tests for marijuana are not routinely performed at the MIEMSS Shock Trauma Center or in other trauma centers and emergency departments. From July 29, 1985 to May 6, 1986, a prospective study of marijuana use among patients admitted to the Shock Trauma Center was conducted.[9] Marijuana use proximal to the time of injury was determined using a radioimmune test. This serum test, which measures delta-9-tetrahydrocannabinoid activity (the psychoactive ingredient in marijuana) is not positive four hours after marijuana use is discontinued. In contrast, urine tests can detect cannabinoid metabolites weeks after cessation of use (depending on user patterns).

The total study population consisted of 1,023 patients who were victims of both vehicular and nonvehicular trauma. Of the 692 patients who were victims of vehicular trauma, 398 were automobile drivers. Almost one-third (31.7 percent) of the drivers had used marijuana. Although there was no significant difference in use among male and female drivers, almost twice as many drivers ≤ 30 used marijuana compared with those older than 30 ($p < 0.001$).

A total of 1,008 patients were tested for marijuana and alcohol. Results for the 677 vehicular crash victims who were tested for both drugs are presented in Table

**Table 2. Marijuana and Alcohol Use among Vehicular Crash Victims Admitted to the Shock Trauma Center, July 29, 1985–May 8, 1986**

| Type of Victim | Number | Marijuana + Alcohol − | | Marijuana + Alcohol + | | Marijuana − Alcohol + | |
|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent |
| Automobile | | | | | | | |
| Drivers | 393 | 61 | 16 | 64 | 16 | 72 | 18 |
| Passengers | 139 | 24 | 17 | 28 | 20 | 19 | 14 |
| Motorcyclists | 74* | 11 | 15 | 17 | 23 | 18 | 24 |
| Pedestrians | 71 | 10 | 14 | 14 | 20 | 17 | 24 |
| Totals | 677† | 106 | 16 | 123 | 18 | 126 | 19 |

*Source:* Soderstrom, C.A.; Trifillis, A.L.; Shankar, B.S. *et al.* "Marijuana and Alcohol Use Among 1,023 Trauma Patients: A Prospective Study." *Arch Surg* (in press).
* 70 drivers; 4 passengers
† 1,008 of 1,023 vehicular and nonvehicular trauma victims in study tested = 98.5 percent.

2. Overall, 229 patients (33.8 percent) used marijuana with or without alcohol; alcohol was detected alone or in combination with marijuana in 249 (36.8 percent) of the victims.[9] For the entire 1,008 patients studied, the use of alcohol and marijuana together was significantly higher than expected ($p < 0.001$) if the use of both drugs was unassociated.

• *Other Drugs* Besides a BAL, urine and blood specimens are tested for other drugs in patients admitted to the Shock Trauma Center. A clinical trauma registry developed at the center includes admitting toxicology data for alcohol, cocaine, PCP, methaqualone, and methadone. Table 3 shows an analysis of data for the period July 1, 1983 through June 30, 1986. Overall, 2.4 percent of vehicular crash victims tested positive for cocaine, phencyclidine, methaqualone, or methadone alone or in combination with another drug. Alcohol was used with one or more of those drugs 51.2 percent of the time.

## The BAL in Perspective

The Committee on Trauma of the American College of Surgeons publishes a document indicating the "resources" a hospital should provide in order to be categorized as a Level I, II, or III trauma center. The first (1976) and subsequent three versions of that document indicate it is "essential" that Level I and II centers provide for "drug and alcohol screening."[10] The standard of practice at the Shock Trauma Center had been to test for alcohol and other drugs even before the committee's recommendations were promulgated.

A national survey of trauma centers conducted in 1985 indicated that only 55.2 percent of 143 Level I and II centers routinely obtained admitting BALs.[11] The major reason given by respondents for not testing for

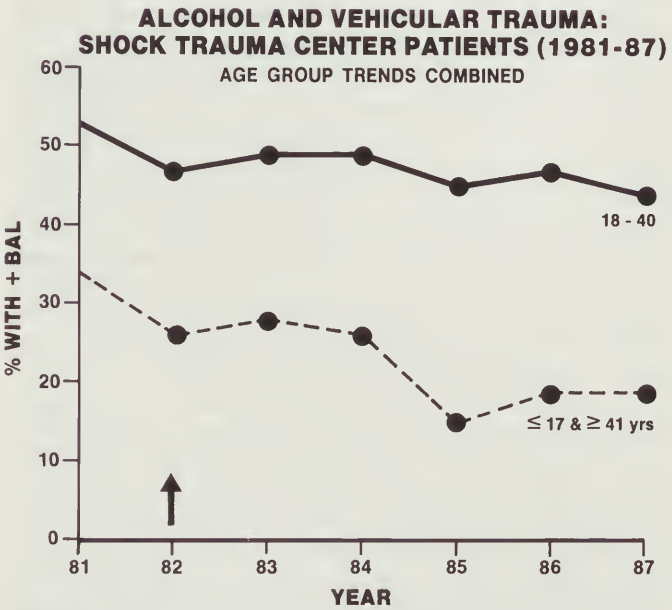



**Figure 2.** Percentage of vehicular crash victims with positive blood alcohol levels (BALs) for the age groups 18-40 and ≤ 17 and ≥ 41 for the years 1981 through 1987. The persistent difference between the groups is significant ($t = 4.89$, $p < 0.001$).

**Table 3. Alcohol and Other Drug Use among Vehicular Crash Victims Admitted to the Shock Trauma Center, 1983–1985**

| Number Tested | Alcohol Only | | Other Drugs* without Alcohol | | Other Drugs* with Alcohol | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| 2,557† | 914 | 36 | 30 | 1 | 32 | 1 |
| Total with Other Drugs = 62 (2.4%) | | | | | | |

*Source:* Data provided by David R. Gens MD and C. Michael Dunham MD, MIEMSS Clinical Trauma Registry.
* Cocaine, methadone, phencyclidine, methaqualone; each drug detected alone or in combination with other drugs in group
† 2,557 of 2,650 patients tested = 96.5 percent.

alcohol was that a BAL was "not clinically important." The second most common reason for not testing involved fears of litigation or legal restrictions. Is the BAL a valuable clinical test? Is it a legal test?

Knowledge of an elevated BAL will not significantly affect the early management of a trauma patient. A patient with an altered sensorium with a possible head injury should be managed as a head injury patient even if he or she appears to be drunk.[12] Intoxication as the cause of an altered sensorium is diagnosed by obtaining a computed tomography (CT) scan of the head to rule out brain injury and by following the clinical course of the patient. Other life-threatening injuries can be ascertained in the head-injured/intoxicated patient by using a few appropriate diagnostic studies.

The clinical importance of the admitting BAL is apparent after resuscitation and early acute care phases of treatment have ended. Knowledge of an elevated BAL coupled with a history of withdrawal syndromes and frequent intoxication will alert the care team to provide prophylaxis against delerium tremens or a less florid manifestation of withdrawal from alcohol.[13]

Alcoholism is associated with frequent and prolonged periods of psychomotor impairment that lead to being injured. The association of injury and alcohol abuse is stated concisely in the title of an editorial by Clark and colleagues,[14] "Trauma as a Symptom of Alcoholism." Reyna and colleagues[15] note that twice as many alcoholics die annually from injuries as from the pathologic processes produced by their disease. They agree with Zuska[2] that the trauma "crisis that brings the alcoholic to the surgeon is an opportunity for intervention in a progressive, often fatal disease."

The admitting BAL is a simple screening test for occult alcoholism. Diagnosis should then lead to intervention for this eminently treatable disease. The national alcohol and trauma center survey revealed that less than one-third (32.8 percent) of responding Level I and II centers employed alcoholism counselors.[11] At the MIEMSS Shock Trauma Center, an alcoholism counselor evaluates patients who have admitting BALs of $\geq$ 80 mg% for an ongoing alcohol abuse problem. Patients with such a problem are given information concerning available community treatment services.

Can one argue that the BAL is "not clinically important" in the management of trauma patients? For those providing care, the admitting BAL should be regarded as a clinical test, not a legal test.

## Alcohol Consumption: The New Law and Traffic Deaths

The overall progressive decrease in alcohol detection among patients at the Shock Trauma Center mirrors a national trend. The per capita national consumption of alcohol has dropped progressively from 2.76 gallons of alcohol per year for those 14 years of age or greater in 1980 to 2.62 gallons in 1985.[16]

The highly significant decrease in alcohol use among those younger than 18 years old treated at the MIEMSS Shock Trauma Center probably reflects compliance with the 1982 law prohibiting the sale of alcohol to that group. That compliance is made manifest by analysis of State Police data for those younger than 18 killed in vehicular crashes from 1982 through 1987. (Data were obtained from the Central Accident Records Division, Maryland State Police Headquarters, Pikesville, MD.) In 1982, 48.9 percent of all those killed in that group had used alcohol, compared with 26.1 percent in 1987. Regression analysis of all those who died indicates the trend illustrated by those figures was marginally significant ($p = 0.053$). In 1982, 48.4 percent of drivers younger than 18 had been drinking, compared with 25.9 percent in 1987. Regression analysis for all drivers killed during the period indicates a significant decrease in the consumption of alcohol ($p < 0.002$). The benefits of raising the drinking age were demonstrated by DuMouchel and colleagues.[17] In a study of 26 states (including Maryland) in which drinking ages were increased, they noted a significant 13 percent reduction in fatal nighttime driver crashes.

## Marijuana

Prior to the Shock Trauma Center study,[9] the largest studies of marijuana use in vehicular crashes involved mostly fatally injured drivers. They revealed use rates of 3.3 percent[18] and 7.8 percent.[19] The Maryland study demonstrated an overall marijuana use of 33.8 percent among all vehicular crash victims and a rate of 31.8 percent among automobile drivers tested for both alcohol and marijuana. Results that are more consistent with those in the MIEMSS study were noted in a select

group of young male drivers killed in California. In that study of 440 drivers, Williams and colleagues[20] noted use rates of 32 to 39 percent among age groups ranging from 15 to 34 years. In the Maryland study, 71.8 percent of the patients were men, and 58.4 percent were 30 years old or younger.

## Other Drugs

Much attention has been given by the media to "hard" drugs, particularly cocaine, crack, and "designer" drugs. Considerable television time and press coverage have been devoted to the epidemics of violent crime associated with the trafficking of such drugs and to deaths of entertainers and athletes from overdoses of them. While this extensive coverage has made the public aware of the dangers of using these other drugs, it has deemphasized our country's major drug problem, alcoholism. A 1986 national household drug survey[21] indicated that 118 million Americans drank alcohol during the month prior to the survey, while 5.8 million used cocaine: a 20 to 1 ratio. Data from the Shock Trauma Clinical Trauma Registry indicate alcohol is detected almost 30 times more frequently than cocaine in vehicular trauma patients and almost 25 times more frequently for all trauma patients. While the dangers of "other drugs" should not be ignored, neither should the drug problem that causes the majority of trauma: alcohol abuse.

## Summary

Alcohol use among all vehicular crash victims admitted to the MIEMSS Shock Trauma Center has decreased between 1980 and 1987 ($p < 0.02$). A very significant decrease has been noted in those younger than 18 years old ($p < 0.004$). In that age group, a significant decrease in alcohol use among fatally injured drivers has been noted from 1982 through 1986 in Maryland ($p < 0.002$). Marginally significant declines in alcohol use have been seen in crash victims 20 to 40 years old and those 41 years of age or older.

About one-third of vehicular crash victims used marijuana prior to the time of injury. A significant association was noted concerning the use of alcohol and marijuana in combination.

Cocaine, PCP, methaqualone, and methadone alone or in combination were detected in 2.4 percent of vehicular crash victims.

### Acknowledgments

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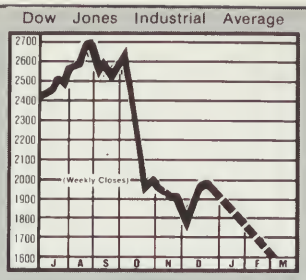
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# Trauma Nursing: Past, Present, and Future

*PEGGY TRIMBLE MA, RN and CONNIE WALLECK MS, RN*

**Trauma nursing grew from care of war casualties to its present form as a nursing specialty addressing clinical, education, research, and administrative aspects of patient care, trauma centers, and systems. The practice encompasses many nursing specialties—aeromedical, emergency, critical care, operating room, medical-surgical, pediatric, rehabilitation, and others.**

**MIEMSS was the pioneer for trauma nursing from its beginning as a recognized specialty in the early 1960s and continues as a leader by developing methods of patient care delivery, designation criteria, protocols for nursing care during interhospital transport, environmental designs for patient care, and professional practice models in a trauma setting.**

Although generic trauma nursing goes back even farther than Florence Nightingale's activities at Scutare in 1854, when she organized the Barrack Hospital to provide better nursing care to wounded and ill soldiers, she is generally credited with organizing this nursing specialty. Ms. Nightingale had to educate her nurses on their roles and functions in this hospital setting. She also had to overcome prejudice and resentment from physicians and military officers and establish cooperative working relationships with the medical officers. In *Notes on Matters Affecting the Health, Efficiency, and Hospital Administration of the British Army*, Ms. Nightingale educated the British government regarding health problems, including the filthy conditions of the Barrack Hospital and the ineffectiveness of the British Army in providing supplies for the hospital.[1] She addressed the total needs of the wounded soldiers by providing shelter, clothing, warmth, appropriate diet, and improved hygiene. Florence Nightingale was the first nurse to keep thorough records of inventory, admissions, and deaths.

The heritage of trauma nursing during times of war continued in the United States through the distinguished service of Army contract nurses during and following the Spanish-American War of 1898 and the permanent nurse corps that served in Chateau Thierry, Bataan, Corregidor, Anzio, Bastogne, Pusan, Pleiku, and Chu Lai.[2] Although these nurses were not officially designated as trauma nurse specialists, in fact, they were. Principles learned through treating devastating traumatic injuries during wartime carried over into the civilian arena and continue to be practiced today in triage methods, rapid evacuation of the sick and injured, blood replacement therapy, and rehabilitation techniques.

In 1961, a two-bed shock/trauma research center was funded by the Department of the Army at the University of Maryland Hospital in Baltimore. R Adams Cowley MD directed this first shock/trauma unit[3] with his nurse colleague, Elizabeth H. Scanlan MS, RN. Nurse supervisor Scanlan, Jane Tarrant RN, and others staffing this research unit probably were the first "shock trauma nurses" in the United States. In 1963, the National Research Center awarded a first-of-a-kind grant to establish a center for the study of trauma, the facility that has evolved into the 107-bed Shock Trauma Center of the Maryland Institute for Emergency Medical Services Systems (MIEMSS).

In March 1966, a trauma center opened in Cook County Hospital in Chicago. Robert Freeark MD and Norma Shoemaker RN were the clinical leaders of that center, the cornerstone of the Illinois statewide plan for trauma care directed by David Boyd MD.[4] In 1971, Dr. Boyd hired Terry Romano RN to direct trauma education and training of nurses. Ms. Romano developed a trauma nurse course based on the concepts promulgated by Norma Shoemaker.

In 1975, Maryland implemented the first (and still only) statewide nursing program devoted to trauma/EMS nursing continuing education, consultation, evaluation/designation, and service through the MIEMSS field nursing program. Today the program provides hundreds of courses a year (including an in-depth trauma nurse course) to thousands of nurses, evaluates the nursing components of trauma and other specialty centers, and provides many hours of free consultation to nurses caring for trauma/EMS patients in Maryland. Additionally, nurses from other countries travel to Baltimore to learn trauma/EMS nursing under this nursing program. National/international leadership is demonstrated by the many MIEMSS nurses who serve as faculty for national/international programs, as authors and editors of publications, and as preceptors for nurses in developing trauma centers/systems in this country and abroad.

Since 1983 the Trauma Nurse Network (TNN), a national network with more than 1,500 members, has provided the forum for communication among nurses practicing in this specialty. TNN holds annual meetings, publishes a quarterly newsletter, and developed

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recommendations for the trauma nurse coordinator role and education for trauma nurses. TNN is now part of the Mathias National Study Center for Trauma and Emergency Medical Systems.

The role of the trauma nurse evolved over the years as a recognized specialty within the profession of nursing. The objective of trauma nursing is to ensure that state-of-the-art nursing practice is delivered and meets the urgent, complex needs of the injured patient population and family members in a continuum of services from injury through rehabilitation.

Today, thousands of trauma nurses practice across the United States. Maryland, a state with a complete emergency medical services system, includes a trauma nurse coordinator (TNC) on its state-level staff and TNCs at each of the state's regional centers. A TNC, an individual with expert knowledge and skills in the practice of trauma nursing, is responsible and accountable for the development and implementation of nursing standards of care for trauma patients and their families, collaborates with the trauma director to develop and implement trauma care protocols and to continuously monitor the effectiveness of these standards, and effects timely corrections of problems. The TNC promotes the harmonious and efficient functions of the trauma team. The TNC in most centers is the person responsible for the trauma registry management, an important database for evaluating the statewide trauma system.

In addition to the trauma nurses practicing in each of the areawide trauma centers, trauma nursing and nurses continue to flourish in the MIEMSS Shock Trauma Center, where more than 280 nurses work in special care areas.

## MIEMSS Clinical Center

The method of nursing management at the Shock Trauma Center is that of collaborative practice. All units are managed in a collaborative style with a clinical nurse supervisor and a medical director for each of ten patient-care units. There is joint decision making regarding unit goals, problem solving, and patient needs. Collaborative practice enables joint physician and nurse participation regarding management of the units. Collaborative practice is carried to the bedside care of the patient, where the primary physician and the primary nurse use a mutual decision-making approach to care planning for the trauma patient.

## Nursing Responsibilities

Nursing care delivery at the Shock Trauma Center since 1974 has been based on primary nursing. The primary nurse assumes the responsibility for planning and delivering nursing care to a caseload of patients on a 24-hour basis during their stay in a particular unit. Patient assessment, care planning, implementation of the plan, and evaluation of the care delivered are all responsibilities of the primary nurse. As patients move "through the trauma system," they are assigned a primary nurse on each unit to ensure the continuity of care needed.

Trauma has a great impact on the patient's loved ones, so their care is as important as that of the patient. In addition to being care planner and patient advocate, the primary nurse interacts with the family to provide information and arrange family conferences with the care team.

Discharge planning is an integral part of the trauma care plan. Preparation for discharge begins when stabilization is achieved. Whether the patient is a candidate for rehabilitation or is able to go home, he/she requires preparation for the transition from the acute care center. The discharge plan incorporates the family and patient to assist them in their adaptation to the patient's disabilities.

## Specialty Care Units

Specialty care units in the Shock Trauma Center include resuscitation, operating room, recovery room, critical care recovery unit, intensive care, intermediate care, neurotrauma, hyperbaric medicine, rehabilitation, home health care, follow-up, outpatient clinic, and Same-Day Surgery clinic. From the time a patient is off-loaded from the helicopter or ambulance to the time of discharge, and follow-up, a nurse is by his/her side.

*Acute Resuscitation Area* The acute resuscitation area, the admitting area, is staffed by nurses who deliver rapid care to the critically ill or multiply injured trauma patient. The nurse begins the assessment at the heliport and continues en route to the admitting area. In the admitting area, the nurse shares the assessment findings with the trauma team. The focus is on rapid diagnosis and treatment. The nurse must use rapid, expert judgment to make decisions and initiate standardized medical orders and nursing therapies.

*Operating Room* If after resuscitation and assessment surgery is required, the trauma operating room (OR) nurse is ready. OR nurses in the Shock Trauma Center must be ready for major surgical cases at all times. One scrub nurse may work with two or three specialty surgeons during one case. Flexibility and stamina are essential for these nurses. In addition to emergency trauma surgeries, same-day surgeries and other delayed-scheduled surgical procedures are performed daily. Preoperative assessments are made on the evening before surgery by the OR nurses.

*Recovery Room* The recovery room nurse provides postanesthesia recovery care to patients in the Center who are not in critical care units. These nurses do the preoperative preparation for patients coming in for same-day surgery. During busy times at the Center, recovery room nurses provide backup care to the admitting area for critically ill patients awaiting beds in the clinical units.

*Hyperbaric Medicine* Hyperbaric oxygen therapy is a unique subspecialty offered at the Shock Trauma Center. Patients with diving injuries, smoke inhalation, and necrotizing infections make up the major population treated with hyperbaric oxygen. Nurses provide care during dives in the multiplace chamber. Treatment is provided to outpatients as well as to critically ill patients, which necessitates flexibility and competence in caring for all levels of patient acuity.

*Critical Care Recovery Unit* Following stabilization and surgery, the patient is admitted to one of the six clinical units. The most critically ill patients are admitted to the critical care recovery unit (CCRU). This high technology, high acuity unit is staffed by specially trained critical care nurses. As in all Shock Trauma Center clinical units, the nurses practice primary nursing.

*Intensive Care Unit* The intensive care unit (ICU) receives direct admissions with single-system injury or less acute multiple-system injuries. This fully monitored unit, the crossroads of the Center, has the greatest turnover of patients per day. A stabilized CCRU patient is usually transferred to the ICU. The care plan developed to meet the individual needs of each patient goes with the patient from unit to unit and is updated as the patient progresses.

*Neurotrauma Units* The neurotrauma acute unit is designed to care for victims with central nervous system trauma. This patient population with brain and spinal cord injuries places great demands on the nursing staff. An understanding of nervous system pathophysiology is required to deliver care to these patients.

*Intermediate Care Areas* As the patient's condition improves, he/she progresses to the intermediate care units (IMCU). While the actual acuity of the illness may be diminished, the demands on the nursing staff are often the same. Pain management, psychological adjustment to the trauma, and active rehabilitation are the priorities of nursing care on these units. Discharge planning and teaching, begun early in the hospitalization, are carried to completion in the IMCUs.

*Rehabilitation* Patients requiring rehabilitation services may be referred to Montebello Rehabilitation Hospital, which has head, spinal cord, and multiple trauma rehabilitation units. The nursing staff is a major component of the interdisciplinary team that provides for both the acute rehabilitation of these patients postinjury and for their reintegration into society.

*Clinic* An outpatient clinic provides follow-up care for the trauma patients. Clinic nurses often perform predischarge assessments and telephone follow-ups. Patients discharged to their homes are provided trauma nursing expertise through the Shock Trauma Home Care Program. This service rendered by nurses from the Center provides continuity of care for the patients.

## Research

In addition to caring for trauma victims, MIEMSS nurses are involved in projects to improve the quality of care. The Nursing Research Committee fosters research into aspects of patient care. One project assessed the effects of suctioning on cardiac output, blood pressure, and intracranial pressure. Other studies examined the effects of immobility on various hemodynamic parameters and other body systems, the need for "hope" in trauma patients' families, and the amount of sleep needed by trauma patients. All of these projects affect the care of trauma patients and/or their families. Nurses also collaborate with physicians in research studies involving therapeutic drug interventions and new therapeutic techniques, such as independent lung ventilation.

## Quality Assurance

Quality assurance (QA) is an integral component of care. The nursing QA committee identifies actual or potential problems in care delivery and determines ways to improve the quality of the care. Unit-based, institutewide QA projects are in place.

Nursing is represented on all of the MIEMSS interdisciplinary committees, ensuring collaboration on all aspects of the Center's functioning. On these committees, such as Infection Control, Pharmacy and Therapeutics, Medical Records, Utilization Review, and Clinical Support Services, nurses carry an equal vote.

## New Initiatives

Shock Trauma, in common with other health care delivery systems, is facing a nursing shortage. Competing with other agencies for qualified nurses is difficult. In 1988, a new program was started to attract student nurses to the Center. The program, called the Student

Nurse in Trauma (SNIT), is designed to teach students trauma concepts and to have them begin to use basic nursing skills in the trauma setting. Students sign an 18-month commitment to work at the Center as clinical nurses after graduation.

Retention of the qualified, dedicated nursing staff already working at the trauma center is important in guaranteeing quality care to all the trauma patients. Seniority benefits to reward time worked at the Center, as well as other contributions to the professional development of the staff, have been implemented. Another retention plan incentive being developed is called the Professional Practice System model. This system empowers staff nurses in a decentralized structure of decision making to manage their units.

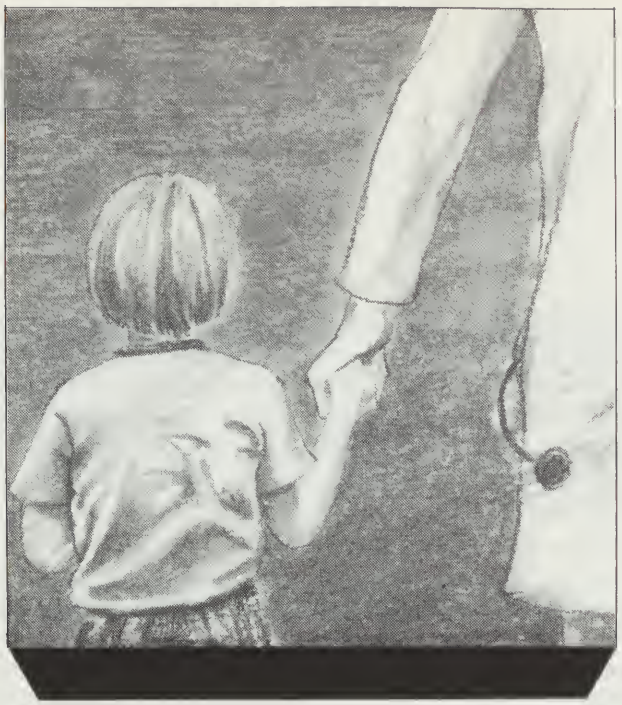
Creating the environment in which professional practice can flourish has been promoted by the nursing administration. Nurses are totally involved in the implementation process. Self-scheduling, peer review, quality assurance, education, budget, and incentives are all components of the system being implemented at the Shock Trauma Center. The future of the Professional Practice System model in trauma care seems promising.

Nurses will continue to work on the cutting edge of trauma care delivery, deliver the high quality of care demanded by the patients, and prepare for tomorrow's professional challenges.

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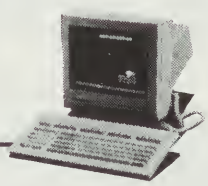
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# Infection Control and Emergency Medical Services: Facts and Myths

*NANCY J. HOYT MA, CIC*

**The primary goal in controlling infection is to prevent the acquisition of infectious diseases by both patients and medical personnel. Application of infection control recommendations requires careful consideration and implementation to ensure the achievement of this goal.**

As the acquired immune deficiency syndrome (AIDS) epidemic has emerged, concern regarding the occupational acquisition of an infectious disease while performing emergency medical services (EMS) has intensified. This is true not only for prehospital and inhospital EMS providers but also for the entire health care community. In fact, the Department of Labor's Occupational Safety and Health Administration (OSHA) has issued an advisory notice[1] and advanced notice of proposed rulemaking[2] for the prevention of acquisition of human immunodeficiency virus (HIV) and hepatitis B virus (HBV) in the health care setting.

Many infection control guidelines addressing the occupational infection risks related to the performance of EMS and the environmental control of these viruses in such settings have recently been published.[3–5] It is important to note that many aspects of infection control practice have changed in recent years. Factors influencing these changes include the development of antimicrobial agents and vaccines, a deemphasis of education in infection control principles in the curricula of health care professional schools, the divergence of the medical and nursing professions into specialties of health care practice, the federal deregulation of disinfectants, the development of sophisticated invasive medical technologies, and the advances in the fields of immunobiology, cellular biology, and molecular biology.

## Occupational Risks

Although a variety of infectious diseases may be acquired by susceptible health care providers in the workplace, the primary personal health threats are direct percutaneous or mucocutaneous exposures to a patient's blood or body fluids. These are the mechanisms of transmission of serious viral disease, for example, hepatitis B; hepatiti non-A, non-B; AIDS; herpetic whitlow; and epidemic keratoconjunctivitis (EKC). The mechanisms of transmission are listed in the Table.

For health care workers, the most serious of these diseases is hepatitis B. The Centers for Disease Control (CDC) in Atlanta, Georgia, has estimated that 500 to 600 health care workers whose jobs involve direct exposure to blood are hospitalized annually in the United States as a result of illness related to hepatitis B.[1] Of these, they estimated that over 200 eventually will die from the lethal sequelae of this disease (12 to 15 expiring from acute fulminant disease, 170 to 200 from cirrhosis, and 50 from hepatocellular carcinoma). In comparison with AIDS, 6 to 30 percent of those not vaccinated or receiving prophylaxis who incur blood/body fluid misadventures involving patients with hepatitis B will develop disease,[6,7] but fewer than 1 percent of those incurring similiar misadventures involving peo-

**Table. Occupationally Acquired Viral Diseases**

| |
|---|
| **Hepatitis B** |
| Modes of transmission |
| By percutaneous and mucocutaneous exposures to infected blood |
| By blood contamination of open wounds and broken or abnormal skin |
| Possibly by saliva in the eye |
| Possibly by human bites |
| Both passive and active immunizations against infection are available. |
| **Hepatitis non-A, non-B** |
| Transmitted by percutaneous exposure to infected blood |
| **AIDS** |
| Modes of transmission |
| By percutaneous exposure to blood |
| Possibly by blood on broken or abnormal skin |
| Possibly by blood in the mouth |
| No reports have been issued of HIV antibody seroconversion from mucocutaneous exposures to the eye. |
| Besides blood, the only other body fluids identified as infectious are semen, vaginal secretions, and breast milk. |
| **Herpetic whitlow** |
| A herpetic paronychia from saliva and respiratory secretions of infected persons accumulating in broken cuticles |
| These infections can superinfect with the bacteria of the skin and cause deeper infections of the muscle and bone. |
| Patients with or without oral lesions can pose an infection risk. |
| Those most susceptible to infection are ICU nurses and anesthesiologists. |
| **Adenoviral conjunctivitis** |
| Mucocutaneous inoculation of saliva or respiratory secretions into the eye |
| May result from an overt exposure or from inoculation of secretions into the eye by unconscious wiping or rubbing of the eye |
| Infections can be serious and may cause corneal infiltrates |
| Outbreaks of epidemic keratoconjunctivitis are highly contagious and can affect both patients and medical personnel |

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ple with AIDS will become HIV antibody positive.[8] To date, no health care worker has died as the result of acquiring AIDS in the workplace.

Despite these statistics and the CDC's recommendation[9,10] that health care workers in high-risk settings should be vaccinated with a hepatitis B vaccine, vaccination programs have not met with much success.[11] Concern over safety and efficacy, lack of education regarding the vaccine, employees' unwillingness to share or assume the expense, and fear of needles have been identified as factors related to vaccine nonacceptance.

Active and long-lasting immunization can be achieved with either one of the hepatitis B vaccines (plasma-derived and yeast-derived) presently being marketed. Both vaccines can elicit antibody response against determinants of the hepatitis B surface antigen (HBsAg), the stimulator of HBV-neutralizing antibodies. For both vaccines, the binding of the HBsAg and the vaccine-induced antibodies is equal to the antibody responses elicited by HBV infection.[12]

The plasma-derived variety consists of highly purified, formalin-inactivated HBsAg particles from chronic carriers of HBsAg. This vaccine has been extensively evaluated for immunogenicity, safety, and efficacy.[9,12–14] Both local (soreness, pain, and tenderness) and systemic (headaches, fatigue/weakness, diarrhea, irritability) reactions have been transient and mild. In a large randomized double-blind trial, vaccine was administered to one group of volunteers and a second group received a normal saline placebo; there was no difference in occurrence of adverse complaints between the two groups.[15]

Since the advent of the AIDS epidemic, there has been concern about the possibility of transmitting HIV to vaccine recipients since some chronic carriers of HBsAg may participate in the high-risk behaviors that facilitate acquisition of AIDS. This is extraordinarily unlikely. The final vaccine is highly purified: only the noninfectious HBsAg protein is detectable. It is inactivated in three steps: treatment with pepsin at pH 2, treatment with 8 M urea, and treatment with formalin. These steps inactivate the HBV as well as all other known families of viruses (including slow viruses causing such diseases as Creutzfeldt-Jakob disease and kuru) that can infect humans.[13]

The yeast-derived vaccine is genetically engineered via recombinant DNA techniques using the yeast *Saccharomyces cerevisiae.* This technique involves cloning the HBV DNA into *Escherichia coli* and isolating the portion of the DNA coding for the HBsAg from restriction nuclease digests. This DNA is then transformed into the yeast by a plasmid expression vector, which gives rise to the HBsAg-producing yeast strain. The HBsAg is released from the disrupted yeast and then purified by chromatographic procedures. The purified HBsAg is essentially free of contaminating yeast proteins and DNA, which, if present, would cause allergic reactions in some people.[16] The genetically engineered HBsAg is similiar in appearance and chemical structure to that extracted from human plasma. Efficacy has been demonstrated in clinical trials, and adverse reactions (local and systemic) have been mild and transient.[16]

The best means of overcoming the anxieties and issues regarding the hepatitis B vaccines is through education emphasizing the benefits of safety and job security. Job security may be threatened if a physician, dentist, or nurse is known to be HBsAg positive. Although a rare event, HBV can be transmitted to patients from HBV-infected health care workers who perform invasive procedures. Therefore, many hospitals and state health departments have policies to restrict the clinical activities or revoke privileges and licenses of HBsAg carriers. In addition, precedent for malpractice by an antigen-positive surgeon was established in Washington state.[17] In that case, neither the surgeon nor the hospital had knowledge of the surgeon's HBsAg positivity. However, HBV infection from the surgeon to the patient was established. The court ruled that, even though it is not standard practice to screen professionals for HBsAg positivity, it is the onus of professionals practicing invasive care to investigate whether they pose such risk to their patients. The decision was for the plantiff and was subsequently upheld in an appellate court.

## Precautions

The need to guard against the acquisition of viral diseases is very real. At the time of initial resuscitation of a trauma patient or when providing emergent medical care, the presence of these viruses is generally unknown. Emergency care providers usually do not have knowledge of the patient's medical history or lifestyle; this information may never be obtainable if the patient expires at the scene of injury or shortly after admission or if he or she sustained an injury or complication of disease that results in permanent cognitive impairment. In addition, prehospital providers can be in situations where the blood of more than one patient contaminates the environment, and it may be difficult or impossible to determine which blood came from which patient.

Of the viral diseases previously mentioned, only patients with a chronic carrier state or active state of hepatitis B viral infection can be easily and reliably identified by blood testing. However, this is not routinely performed by the majority of health care facilities. There are several reasons for this:

- the prevalence of HBsAg carriers among the general United States population is approximately 0.5 to 2 percent[10] and the routine screening of all hospitalized patients may be prohibitively expensive for many hospitals
- performance of an HBsAg test may be irrelevant to the underlying reason for the patient's admission to the hospital
- many hospitals are not equipped to perform these tests on site
- employees can be vaccinated against HBV
- prophylactic treatment can be given for occupational misadventures such as needlestick injuries

Therefore, it is estimated that approximately 90 percent of HBsAg carriers who are hospitalized are undetected as carriers of the virus during admission.[6,14] Tests that can identify the agent or agents responsible for hepatitis non-A, non-B have only very recently been developed.

Identification of HIV-infected patients who may pose an occupational risk to emergent health care workers cannot be guaranteed via the HIV antibody tests (enzyme-linked immunosorbent assay [ELISA] and Western blot electrophoresis). These tests identify antibodies to HIV, not the virus itself, so positivity is primarily a demonstration of past infection. Because these are antibody tests, newly infected individuals may test negative since their body has not had adequate time to mount an antibody response. These individuals may have viral particles in their blood that can infect a health care worker who sustains a percutaneous or mucocutaneous exposure to that blood.

Although these tests have been widely used for the detection of HIV antibody, both have intrinsic flaws.[18,19] The ELISA is a highly sensitive test for antibody response; however, it is not specific: reactivity with similiar antibodies can give positive results. Western blot electrophoresis is a highly specific test for HIV antibody proteins, which are identified on the basis of molecular weight; adequate concentrations of antibody proteins must be present before the results are considered positive. It is not a very sensitive test, and results can be inconclusive. Therefore, the most widely accepted criteria for HIV antibody positivity require that both tests be performed and both tests be positive. Another factor that may influence HIV antibody positivity is massive fluid replacement in trauma patients. In this situation, the antibodies may be diluted, and the patient's HIV antibody test would be falsely negative.[20]

No one should have a cavalier attitude about touching a patient's blood, body fluids, or mucous membranes with an ungloved hand. Everyone should wear appropriate protective attire when the probability of being splashed with blood or body fluids exists. Infection control must include education regarding the nature of the diseases, the mechanisms of transmission, the potential for infection, and the methods of protection.

## Patient Care Practices

The Centers for Disease Control recently issued extensive guidelines outlining specific patient care procedures that would minimize occupational risks for acquiring infectious diseases in the health care setting.[21] Most health care facilities have moved swiftly to implement these comprehensive recommendations; however, their application requires careful consideration.

*Gloves* When the CDC recommended the implementation of universal precautions for the prevention of occupational acquisition of blood-borne diseases, glove utilization both inside and outside hospitals dramatically increased. Consequently, there is a national shortage of gloves, in particular, sterile surgical and procedure gloves. While some of this shortage is attributed to increased demands, a major factor is inappropriate use of gloves. Gloves should be worn only when a task involves direct contact with blood or body fluids. They should be removed as soon as the task is completed, and handwashing should be performed. Wearing gloves should *never* be viewed as a substitute for handwashing. In addition, the failure to remove gloves promptly can facilitate cross-infection among hospitalized patients and increase nosocomial infection rates.

Some people think that only sterile medical-grade gloves can provide adequate protection. So everyone—physicians, nurses, allied health professionals, laboratory technicians, morticians, public service personnel, and ancillary and environmental services personnel—has been using these gloves. However, it is important to remember that glove strength, not sterility, is the key factor determining occupational protection. Questions concerning the permeability of nonsterile gloves can be answered by evaluating the effectiveness with dyes such as methylene blue.

Sterile gloves should be worn only for those procedures in which the patient needs protection from the acquisition of a nosocomial infection. These include invasive and operative procedures. Sized nonsterile disposable gloves should be used for any other procedures or tasks in which finger dexterity is important to the task and that involve the manipulation of blood samples, IV monitoring lines, or the performance of a variety of laboratory tasks. Mid-weight plastic or rubber gloves should be worn for cleaning procedures, and heavy gloves (for example, leather gloves) should be worn for waste and trash removal. Therefore, glove use must be task-specific, ensure both the safety of patients

and personnel, and maximize availability. It is the responsibility of all to enforce compliance.

*Eye Protection* Selection of proper eye protection must facilitate safety as well as maintain vision. Visors or goggles are most appropriate for procedures that involve cutting or drilling bone, when using pulsatile-jet lavage irrigation systems, when controlling hemorrhage, and while performing vascular surgery or dental procedures. Plain glass or prescription eyeglasses may be suitable for working in areas of the hospital other than operative suites, emergency departments, invasive radiology suites, or labor and delivery suites.

*Handling of Sharps* Although there is agreement that recapping needles is an unsafe practice, some procedures may require recapping a needle to remove it from a syringe or IV tubing. Examples include drawing a percutaneous arterial blood sample, exchanging needles when obtaining blood cultures, and connecting mini-dose intravenous medications. Therefore, all patient care procedures should be evaluated for safety; when appropriate, alternatives should be sought to minimize risks. In addition, technical proficiency should be monitored, and those procedures identified as resulting in consistent needlestick injury must be improved. The best mechanism to accomplish this is to document all needlestick misadventures. This allows monitoring of the acquisition of disease and the safety of patient care practices.

*Handwashing* Handwashing is one of the best methods of infection control in the health care environment. It facilitates protection of the patient from acquisition of nosocomial infection and of the provider from occupational acquisition of an infectious disease. However, unless there is a constant reminder, as well as an awareness of the importance of the procedure, handwashing is often forgotten. The use of waterless hand-care products, especially in the prehospital setting, can be useful when there is no easy access to water sources and sinks; however, they should not be considered a substitute for handwashing. If these products are used, the hands should be washed thoroughly as soon as patient care allows.

Failure to perform handwashing can be implicated in the acquisition of viral disease and may be an important factor in HBV transmission. While it is clear that transmission of HBV occurs by direct percutaneous and mucocutaneous exposures in the workplace, a significantly high number of those infected disclaim any knowledge of previous misadventure.[22] Although the possibility that the acquisition of infection could have resulted from an exposure in the community, the mode of transmission in most of these cases might be attributed to the unconscious habits of personnel and failure to comply with accepted practices of infection control. Health care professionals may easily contaminate their hands with a patient's blood or oral secretions when they fail to wear gloves while performing vascular punctures, inserting IV lines, intubating patients, and suctioning respiratory secretions. Blood and secretions can accumulate under their fingernails and around their cuticles. If they then fail to adequately wash their hands, they can subsequently inoculate themselves with these body substances via unconscious habits such as wiping their eyes, biting their fingernails and cuticles, using a pen and then putting it in their mouths, picking up a syringe and pulling the needlecap with their teeth, scratching insect bites, rubbing abrasions, or eating and drinking in a patient care area.

### Cleaning, Disinfection, and Sterilization

No other infection control guidelines create more confusion than those outlining cleaning, disinfection, and sterilization recommendations. The major problem is a misconception regarding basic terminology and the application of decontamination, disinfection, and sterilization techniques. It is not uncommon for these terms to be misused or inappropriately interchanged by supervisory personnel or those viewed as an authority on the subject. *Decontamination* is a process that removes disease-producing microorganisms and renders the object or environment safe. It can be as simple as washing a surface with hot soapy water or rinsing an object under running water. *Disinfection* is a process that kills or destroys most disease-producing microorganisms except for the resistant bacterial endospores. The process can vary from low-level (which kills vegetative bacteria, fungi, and lipid viruses) to high-level (which kills vegetative bacteria, tubercle bacillus, some spores, fungi, and lipid and nonlipid viruses). *Sterilization* is a chemical or physical process that results in the total destruction of all microorganisms, including highly resistant bacterial spores.

The application of these procedures is determined by the specific use of the equipment or instrument.[23] Sterilization is required for critical items, defined as those that are inserted into or interface with the cardiovascular system, are implanted into the body, or are used for invasive surgical procedures. Disinfection is required for semicritical items, defined as those that touch or invade mucous membranes; high-level disinfection is recommended for respiratory equipment to ensure the eradication of mycobacteria. All other items and surfaces are considered noncritical and require cleaning, sanitizing, or low-level disinfection. To be effective,

disinfection and sterilization procedures must be performed on precleaned surfaces. Most disinfectants are inactivated in the presence of organic matter. Concentrations of disinfectants and sterilants must be exact and in accordance with label instructions. Spraying disinfectants on surfaces is ineffective and not recommended since neither concentration of ingredients nor an even distribution of solution can be achieved.[24] Most disinfectants can be toxic to the personnel who use them: anyone performing decontamination, disinfection, and sterilization procedures must wear appropriate protective attire. Toxicity of products can be assessed from a Materials Data Safety Sheet, which must be available from all disinfectant manufacturers.

No single disinfectant is a panacea. Antimicrobial effects are variable and a wide variety of chemical-inanimate object incompatibilities must be considered. Although there is variance among products, disinfectants and sterilants can corrode metal, leave ionic residues, stiffen and crack plastic, etch glass, stain plastic, short-circuit electronics, and dissolve adhesives and lens cement. Therefore, selection of a sterilization or disinfection process must be in accordance with the equipment manufacturer's recommendations. However, some manufacturers of hospital equipment may outline sterilization or disinfection procedures even though these practices may not be necessary.

All hospital-grade disinfectants, including glutaraldehydes, are solutions and 97 to 99 percent of ingredients are unknown to the consumer. These are listed as "inert ingredients," but they are inert only with respect to their germicidal capabilities and not their ability to react with a variety of inanimate materials. For example, a 2 percent glutaraldehyde solution may contain a surfactant that, over time, can dissolve the lens cement of a fiberoptic endoscope. This ingredient is not listed on the label and its presence may not be known unless specific inquiry is made.

Many assume that the Environmental Protection Agency (EPA) regulates the efficacy of disinfectants; however, this is not the case. Since 1979, the federal government has deregulated the chemical manufacturing industry in regard to disinfectants and antiseptics. The EPA no longer conducts efficacy testing of disinfectants[25] and the Food and Drug Administration has never completed its proposed guidelines for efficacy testing of antiseptics.[26]

Registration of a disinfectant requires the manufacturer to present data that support the labeling claims of its active ingredients; however, it does not require disclosure of the inert ingredients or the exact formulation of the solution.[27] Therefore, when evaluating the efficacy of a product, consumers must rely on the integrity of the manufacturers and the laboratories they employ. It is alarming that the manufacturers may not have the technical data to support their claims. In a recent collaborative study of EPA-registered hospital disinfectants conducted among 18 laboratories routinely involved in the efficacy testing of disinfectants, 20 percent failed products for *Salmonella choleraesuis*, 37 percent failed products for *Staphylococcus aureus*, and 62 percent failed products for *Pseudomonas aeruginosa*.[28] In addition, four laboratories unknowingly tested their own product, and three of the four failed their product with one or more of the test organisms. Ineffective disinfectants and antiseptics can have major impact on the development of nosocomial infections, and selection of these products mandates meticulous scrutiny by the medical community. There is a move by Congress to remedy this situation: House Bill 2355, the EPA Research Reauthorization Act.[26]

A major disinfectant dilemma of recent years has centered on the eradication of HIV and HBV in the environment. Early in the AIDS epidemic most infection control guidelines recommended the use of household bleach in 1:10 dilution for environmental cleaning. This recommendation was largely derived from those developed in the 1970s for HBV. However, as our knowledge of HIV has advanced, no environmental mechanisms of HIV infection have been documented,[21] a variety of disinfectants have been proved to be effective against this virus,[29,30] and the CDC is recommending detergent disinfectants for environmental cleaning.[21] Therefore, standard recommendations for cleaning, disinfection, and sterilization are adequate measures to control this virus in the health care setting.

HBV has often been considered as some sort of "super virus" because of its ability to survive under a variety of environmental conditions.[31] Because HBV is not easily adapted to tissue culture techniques in the laboratory, kinetic studies for its inactivation by physical and chemical agents were lacking and many recommendations were predicated upon empiric analysis of the known biocidal activity of a particular treatment. In the mid-1970s, the CDC undertook intensive studies using radioimmunoassay (RIA) techniques for the detection of HBsAg and infectivity studies with chimpanzees to establish practical guidelines for environmental control of HBV in health care settings.[31] These studies demonstrated that undiluted serum for HBSAg carriers could be inactivated by a 1:10 dilution of household bleach in 30 minutes. Household bleach is 5.25 percent hypochlorite, and a 1:10 dilution gives 5000 ppm of active ingredients. However, even at much smaller concentrations (500 to 1000 ppm), bleach solutions still can be corrosive to metals.

During this series of studies, it also was demonstrated that HBsAg could be eliminated by the mechanical

action of cloths soaked in water or moistened with hemolytic detergents used on smooth, hard surfaces such as asbestos floor tile; coarse-textured, nonabsorbent, rubber foam-backed upholstery material; or plastic instrument knobs. This was taken as reasonable proof of HBV eradication since the ratio of HBV to HBsAg in serum is 1 to greater than 2,000, and reduction of HBsAg below a detectable level implies an equally large reduction in the infective potential of the contamination. Therefore, detergent disinfectants were recommended for environmental cleaning even when an area was visibly contaminated with the blood or feces of a patient with hepatitis.[32] However, bleach solutions were still recommended for surfaces such as curled or grooved instrument knobs that could not be cleaned easily. Environmental disinfection with bleach solutions was recommended for hemodialysis units to reduce the nosocomial transmission of HBV. In this setting, it was theorized that critical and semicritical items used during dialysis could be contaminated by environmental HBV even if the personnel wore gloves.[33]

Since these studies, inactivation of HBV has been demonstrated by other intermediate- to high-level disinfectant chemicals.[34,35] Most importantly, it has been shown that 70 percent isopropyl alcohol and 2 percent glutaraldehyde solutions can inactivate HBV in dried human plasma when exposed to these chemicals for 10 minutes at 20°C. From these chimpanzee infectivity models, it was concluded that the resistance of HBV to disinfectant chemicals is not as extreme as once thought and that these disinfectants could possibly be used on HBV contamination with a margin of safety.

Although HBV may survive in the environment, it does not mean that the modes of transmission are different. It still requires a mucocutaneous or percutaneous exposure of the virus to cause disease. In addition, environmental survival does not mean the virus is any less susceptible to chemical or physical inactivation. Therefore, the best means of protection is to wear gloves while performing cleaning, decontamination, and disinfection procedures and to meticulously clean the environment. Bleach must be used with caution because of its corrosive capabilities. Alternative methods of disinfection should be used when bleach is incompatible with the material being disinfected.

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# Hyperbaric Medicine: What Is It; How Is It Used?

*ROY A. M. MYERS MD and LOUIS MARZELLA MD, PhD*

**There has been steady growth in the use of hyperbaric oxygen therapy by an increasing number of facilities throughout the United States. The mechanisms of action associated with hyperbaric oxygen therapy that have proved beneficial in the treatment of a variety of diseases and conditions include pressure, dissolution of oxygen in plasma, fibroblastic proliferation, macrophage-enhanced phagocytosis, neovascularization, and antitoxin and antimicrobial effects. In describing the history and practice of hyperbaric medicine, we focus on the program at MIEMSS.**

The Hyperbaric Medicine Department of MIEMSS has been in operation for nearly 20 years. It began when R Adams Cowley, a thoracic surgeon, explored the use of hyperoxygenation states achieved by breathing 100 percent oxygen under pressure to protect the patient's brain and other organs during cardiac surgery. This particular usage was obviated by the advent of bypass surgery. The field of hyperbaric medicine has had its "ups and downs"; a particular "down" was in the late 1960s when it was being used indiscriminately. Patients with any of 350 different conditions were exposed to hyperbaric oxygen: the result was disillusionment of the medical community with hyperbaric medicine.

The 1970s saw a cautious resurgence of interest in hyperbaric medicine, which has gained momentum into the 1980s.[1] The growth in this decade has been more controlled. Much of the direction has come from the Hyperbaric Oxygen Therapy Committee of the Undersea and Hyperbaric Medical Society. This committee was created to develop clinical criteria for use of hyperbaric oxygen and to issue safety standards for the physical equipment used and for the dosage of oxygen administered to prevent toxicity.[2–4] Insurance carriers and Medicaid accepted the recommendations of this committee and are making payments for the use of hyperbaric oxygen in the treatment of the conditions listed Table 1.

To further clarify the criteria for use of hyperbaric oxygen therapy, the original four categories[3] have been regrouped into two.[3, 4] **Category I (Accepted Conditions)** includes the disorders for which hyperbaric oxygen therapy either is the primary mode of therapy or has proved to be an important adjunctive measure. *In vitro* and *in vivo* studies have provided sound physiological rationale for the use of hyperbaric oxygen in these conditions. Despite wide clinical experience, controlled human studies have not been undertaken. Cost effectiveness has been considered in establishing treatment standards for each condition. These standards are designed to optimize oxygen dosage through the duration and frequency of oxygen exposure and the pressure level used for treatment. Attention is also paid to criteria for selecting patients.

**Category II is Investigative Conditions.** The committee reasoned that the rationale for treatment of these conditions was sufficient, but no compelling evidence of therapeutic benefits yet existed. Patients with these conditions should be treated only according to a research protocol. With peer review, third-party payment can be sought at the discretion of the treating physician.

The number of hyperbaric facilities in the country has risen steadily from 35 in 1977[1] to 230 in 1986.[5] There are two types of chambers. In the multiplace chamber, two to eight patients and a nurse or physician (inside tender) are all compressed in ambient air to the desired treatment depth, and the patient then breathes 100 percent oxygen. The monoplace chamber, or single-person chamber, is filled with compressed oxygen and, unless the patient needs ventilator assistance, it is unnecessary to provide any vehicles such as a mask for administration of the oxygen. Each chamber has advantages and disadvantages. In general, mainly for economic reasons, there are more monoplace than multiplace facilities throughout the nation (Table 2).

## MIEMSS Experience, 1981–1986

In the past six years, 1,422 patients have been treated with hyperbaric oxygen therapy in the MIEMSS pro-

**Table 1. Accepted Conditions**

—Air or gas embolism (acute)
—Carbon monoxide poisoning, acute smoke inhalation, and assumed CO/cyanide poisoning
—Crush injury, compartment syndrome
—Decompression sickness
—Enhancement of healing in selected problem wounds
—Exceptional blood loss (anemia)
—Gas gangrene (clostridial)
—Necrotizing soft tissue infections (subcutaneous tissue, muscle, and fascia)
—Osteomyelitis (refractory)
—Radiation necrosis: osteoradionecrosis and soft tissue radiation necrosis
—Skin grafts or flaps (compromised)
—Thermal burns (special consideration)

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**Table 2. Summary of Patients Treated by Type of Chamber (1971–1987)**

| Type of Chamber | Number of Chambers | Number of Patients Treated |
|---|---|---|
| Monoplace | 140 | 34,886 |
| Multiplace | 85 | 16,327 |
| Both | 21 | 11,335 |
| Total | 246 | 62,548 |

gram. All but 58 of these patients were in the accepted category, and payment was provided by insurance carriers. Table 3 indicates the conditions treated, the numbers of patients with each of those conditions, the total number of dives per year, and dive hours per year.

## Entities Treated

*Decompression Sickness, Air/Gas Embolism* With the development of the National Diving Alert Network, nationwide coverage for diving accidents has been achieved. MIEMSS is the coordinator for the northeast sector of the country encompassing a 13-state area (Virginia, West Virginia, Maryland, Pennsylvania, and all other states up to the Canadian border). The coordinating center is responsible for knowing the location and capabilities of all chambers in the sector. A telephone call to either the Regional Center (MIEMSS) or the National Center (Duke University, Durham, North Carolina) by the diver, a colleague, a paramedic, or the initial referring hospital activates the system. When a diving accident (decompression sickness, air embolism) occurs, the patient is referred to the closest, most appropriate chamber for treatment. This network has cross-covered the nation, dividing it into seven regions, with a central coordinator at Duke University. The network provides timely treatment for diving accident victims nationwide.

*Smoke Inhalation/Carbon Monoxide Poisoning* In Maryland's statewide EMS program, patients in coma or with altered mentation related to smoke inhalation or carbon monoxide poisoning are referred to the MIEMSS Hyperbaric Medicine Center for assessment and treatment. In 1987, over 100 patients were referred to MIEMSS with these two conditions.[5–9] Assessment protocols such as psychometric testing,[6] treatment recommendations, and a better understanding of carbon monoxide poisoning and its sequelae have resulted from this experience with a specific patient population.

*Gas Gangrene (Clostridial and Nonclostridial)* The number of cases of gas gangrene has decreased over the past few years to fewer than five per year. The incidence of soft tissue infections, including necrotizing fasciitis and the mixed infections occurring in compromised hosts, such as those with diabetes, peripheral vascular disease, malnourishment, and obesity, has increased considerably. Between 25 and 30 of these patients are treated in the MIEMSS hyperbaric facility per year. Specific protocols have been developed for the management of these patients. Aggressive surgery is undertaken immediately after stabilization of the patient. This is followed by repeated surgery (often daily) until there is no further spread of the infection. Hyperbaric

**Table 3. MIEMSS: Summary of Diseases Treated in Each Year**

| Disease | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | Total |
|---|---|---|---|---|---|---|---|
| Air embolism | 2 | 0 | 3 | 3 | 2 | 0 | 10 |
| Anemia (blood loss) | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Carbon monoxide poisoning | 23 | 21 | 17 | 12 | 18 | 66 | 157 |
| Compromised skin flaps | 0 | 0 | 0 | 0 | 0 | 24 | 24 |
| Compromised skin grafts | 0 | 4 | 18 | 6 | 20 | 9 | 57 |
| Crush injury, unspecified | 0 | 0 | 2 | 51 | 19 | 29 | 101 |
| Cyanide poisoning | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Decompression sickness | 6 | 14 | 7 | 6 | 11 | 6 | 50 |
| Gas gangrene (clostridial) | 4 | 8 | 10 | 3 | 1 | 2 | 28 |
| Ischemic condition-diabetic ulcer | 0 | 0 | 17 | 10 | 9 | 0 | 36 |
| Necrotizing fasciitis | 0 | 11 | 2 | 0 | 21 | 19 | 53 |
| Osteomyelitis, unspecified | 23 | 27 | 20 | 27 | 27 | 15 | 139 |
| Radiation necrosis, unspecified | 17 | 21 | 43 | 23 | 36 | 35 | 175 |
| Smoke inhalation | 15 | 19 | 18 | 16 | 25 | 38 | 131 |
| Soft tissue infection | 7 | 10 | 3 | 25 | 0 | 11 | 56 |
| Wound healing, unspecified | 21 | 132 | 68 | 43 | 32 | 50 | 346 |
| Totals | 118 | 267 | 229 | 225 | 221 | 305 | 1,365 |
| Total dives per year | 2,325 | 3,363 | 4,922 | 4,922 | 5,318 | 5,044 | 25,659 |

oxygen is also initiated soon after surgery has been completed and is continued through to ultimate wound closure. Wounds are closed early (at day four or five postadmission), when no further signs of progression of infection are seen. With this management, 70 percent of these severely ill patients can be saved.

*Radiation Necrosis* An average of 35 patients with radiation necrosis are seen yearly, including those with dental caries in radiated mandibles or maxillas. There is a high incidence of subsequent osteoradionecrosis following the extraction of these teeth. Hyperbaric oxygen coverage is used routinely prior to and following extraction. The management of patients has been simplified and the costs of treatment have been reduced. Hyperbaric oxygen has become the prime mode of therapy for this condition.[10]

*Wound Healing* Hyperbaric oxygen is used to promote wound closure in nonhealing wounds in more than 50 patients each year at the MIEMSS facility. They range from victims of trauma to patients with chronic, nonhealing wounds in poorly vascularized tissues. Specific types of nonhealing wounds include ulceration or gangrene in lower extremities of diabetic patients and nonhealing amputation stumps in patients with diabetes or peripheral vascular disease. In these conditions, oxygenation of the tissues is poor due to vascular disease.

*Crush Injuries* Mechanical trauma to major muscle groups can induce hemorrhage, swelling, and microvascular thrombosis. In general, the patients treated in MIEMSS hyperbaric chamber have grade III fractures such as those resulting from bumper injuries. Crush injuries with avulsion of tissue flaps also benefit from hyperbaric oxygen treatment.

*Skin Grafts and Flaps* Increasing efforts are being made to salvage ischemic flaps. Research in animals indicates the effectiveness of hyperbaric oxygen treatment.[11, 12]

## Discussion

The total number of patients treated in the MIEMSS hyperbaric chamber and the hours of diving per year have increased dramatically. In the first 14 years of operation, 427 patients received 5,659 treatments. In the next 6 years (1981 to 1986), 1,422 patients were treated in 25,659 dives.

In the Maryland-Washington-Pennsylvania area, the number of available facilities has increased in the past few years. Monoplace chambers are now available at Shady Grove Adventist Hospital, George Washington University, and Mt. Vernon Baromedical Services. In Philadelphia, a number of chambers have opened at the University of Pennsylvania, Graduate Hospital, and Hahnemann University.

As physician awareness of the potential benefits of hyperbaric oxygen therapy increases, so does patient load. National statistics indicate a significant increase in patient treatments. In the years 1970 to 1976, approximately 7,700 patients were treated for all conditions.[1] A survey of hyperbaric facilities was conducted in 1986[13]; 240 questionnaires were distributed, and 133 responses were received. In a six-year period (1980 to 1986), 35,016 patients were treated in 133 hyperbaric facilities in the United States. Of these patients, 21,015 were treated in monoplace chambers, 8,941 in multiplace, and 5,060 in facilities with both types of chambers.

The chamber safety record is impressive and the incidence of oxygen toxicity remains very low. In our Institute in the past 10 years of treatments, covering a total of 44,280 diving hours, there have been 6 cases of decompression sickness in the inside tender. The incidence of oxygen toxicity in our patients is also low,[14] as are the other complications of barotrauma to ears, lungs, and teeth. In 14,966 dives, a total of 137 (0.9 percent) incidents of acute oxygen toxicity symptoms have occurred in 891 patients (Table 4).

*Mechanisms of Action of Hyperbaric Oxygen* The mechanisms of action of hyperbaric oxygen are varied and include effects directly related to pressure. The volume of a bubble is reduced in an inversely proportional manner to the pressure applied (Boyle's law). The interaction of a gas with a fluid phase under pressure results in an increase in the amount of the gas dissolved in the fluid. Thus, the oxygen tension in the alveoli, bloodstream, tissues, and cells is greatly increased (Henry's law).

**Table 4. Incidence of Acute Oxygen Toxicity Symptoms (1978–1983)**

| Symptoms | Percent |
|---|---|
| Nausea and vomiting | 0.37 |
| Seizures | 0.21 |
| Muscular twitching | 0.13 |
| Anxiety | 0.09 |
| Vertigo | 0.06 |
| Altered consciousness | 0.05 |
| Respiratory changes | 0.05 |
| Behavior changes | 0.03 |
| Sweating | 0.03 |
| Auditory changes | 0.02 |
| Visual changes | 0.02 |

The major use of the pressure effect of hyperbaric oxygen is in the treatment of dysbaric conditions such as air embolism and decompression sickness. The pressure volume changes of the gases are the vehicle of treatment. The greater the increase in pressure, the smaller the volume and diameter of the bubble in the bloodstream and capillaries. This allows the bubble to pass through the arterial system into the venous system and then be absorbed in the lungs.

At greatly increased levels, oxygen can act as a drug, eliciting various biological responses that are directly related to the length of time of exposure and the pressure applied. A most promising area for research is exploitation of these effects for therapeutic purposes. The increased oxygen has a variety of actions on different organs and tissues in the body. Under increased oxygen tension, the tissue blood flow is reduced and a decrease of 20 percent of blood flow has been noted at 2 atmospheres of pressure (ATA) in specific tissue compartments.[15] The blood flow reduction is compensated by the hyperoxygenation of the blood, which prevents the problem of hypoxia. Outflow from the microcirculation is maintained and tissue edema is reduced. Repeated treatments with hyperbaric oxygen result in greater amounts of edema reduction; up to 50 percent has been noted.[16, 17]

*Tissue Repair: Fibroblastic Proliferation and Neovascularization* The process for tissue repair, including fibroblastic proliferation, neovascularization, and collagen formation, requires adequate tissue tensions of oxygen.[18–20] In injured and ischemic tissue, fluid escapes from the vasculature into the extravascular space. This fluid creates a relative diffusion barrier between the microvasculature and the tissue parenchyma, resulting in further reduction in oxygenation of cells. The addition of hyperbaric oxygen overcomes this problem by supersaturating the tissue with higher oxygen levels and, at the same time, effectively reducing the amount of edema.

It is essential to understand the concept of increased oxygen concentration as a result of increased pressure with increased amounts of oxygen dissolved in plasma in accordance with Henry's law. An arterial $PO_2$ of approximately 2,200 mm Hg may be achieved by a 3 ATA pressurization. At this pressure, 6.7 volumes percent of oxygen are thus in solution in the plasma.[21, 22]

Many nonhealing wounds are hypoxic with tissue oxygen tensions of under 15 mm Hg.[23] Fibroblastic synthesis of collagen for the development of a extracellular matrix for capillary budding into an avascular area requires tissue oxygen concentrations between 20 and 40 mm Hg.[24]

With restoration of normal tissue oxygen levels, cellular and capillary proliferation may be enhanced. Microangiographic studies in burn wound revascularization and skin flaps demonstrated a major new blood vessel growth into wounds occurring under hyperbaric oxygen treatments.[11, 25]

*Enhanced Bacterial Killing by Neutrophils* Mader *et al.*[26] showed a diminished bacterial killing by neutrophils at tissue oxygen tensions between 5 and 10 mm Hg. Increasing oxygen tensions enhanced the bactericidal activity in a linear fashion. After neutrophils ingest bacteria, molecular oxygen is required for bacterial killing. The oxygen is reduced to superoxide free radical by oxidases on the phagocytic membrane.[27, 28] Superoxide is metabolized further to produce hydrogen peroxide and other toxic molecules that kill the bacteria.[29–31] Mader *et al.*[26] were able to show that low oxygen tensions in chronic osteomyelitic bones responded dramatically to hyperbaric oxygen therapy, with an elevation in oxygen levels of bone to 150 torr, which increased phagocytic killing of staphylococcal organisms. Bacterial killing was as effective with hyperbaric oxygen therapy as with an appropriate antibiotic.

*Other Antimicrobial Effects of Oxygen* Even low tensions of oxygen can kill anaerobic organisms. These organisms lack superoxide dismutase and catalase. The presence of oxygen thus results in the formation of superoxide radicals, which cannot be detoxified and are lethal to the organism.[32] High oxygen tensions can inactivate some toxins such as clostridial $\alpha$-toxin. This toxin can destroy cell membranes and increase capillary permeability.[33] Oxygen is also required for maximal efficacy of some antimicrobials. In the case of aminoglycosides, oxygen is needed for the transport of the drug into the bacteria. In anoxic conditions, the effectiveness of the aminoglycosides is reduced. This well-known phenomenon is illustrated in Table 5.

**Table 5. Decreased Effectiveness of Gentamicin in Anaerobic Conditions**

| *E. coli* strain or clinical isolate | Diameters of Zones of Inhibition (mm) | | Ratio |
|---|---|---|---|
| | Aerobic | Anaerobic | Anaerobic/Aerobic |
| #2 | 21.4 | 12.2 | 0.57 |
| #7 | 20.9 | 13.1 | 0.62 |
| #16 | 23.4 | 13.2 | 0.56 |
| ATCC #25922 | 22.9 | 12.5 | 0.55 |

*Note: E. coli* were grown on agar plates either in room air (21% $O_2$, aerobic) or in 0% oxygen (anaerobic).

*Use of Hyperbaric Oxygen in Radiation Necrosis* Radiated tissue brings together the major problems of tissue hypoxia and wound breakdown. The progressive proliferative endarteritis in irradiated tissues results in tissue ischemia, which may lead to ulceration and exposed bone. Because reconstructive surgery of the fact is often disfiguring and major difficulties exist in the implantation of graft tissue into radiated areas, hyperbaric oxygen has become a means of promoting wound healing in the radiated patient. In soft tissue other than the face and neck area, total excision of all the involved radiated tissue and grafting with vessel-bearing myocutaneous flaps can be undertaken. Hyperbaric oxygen and its resultant increased tissue oxygen tensions in hypoxic tissue results in the growth of functional capillaries. This revascularization then supports skin flaps and skin grafts. The impaired bacteria killing ability of hypoxic leukocytes is restored with the normal elevation of oxygen tension. The vascular bed produced is not infected and allows successful reconstruction. Marx has led the way in defining the role of hyperbaric oxygen therapy in the treatment of osteoradionecrosis.[34–37]

## Conclusion

With a better rationale for action, hyperbaric oxygen therapy is being used on a wider basis than before. In today's medical economics, where cost containment is becoming more important, the usefulness of hyperbaric oxygen is apparent. Much of the hyperbaric oxygen therapy undertaken at the MIEMSS facility is done on an outpatient basis. This reduces total costs, since the patient can be admitted for same-day surgery and short hospital stays. With the excellent safety record of hyperbaric oxygen therapy and its potential for cost containment, increasing use rates are anticipated. A wider dissemination of knowledge about the availability and efficacy of hyperbaric oxygen therapy is needed. Through this, physician support should increase, thus ensuring a promising future for hyperbaric oxygen therapy as an adjunctive therapy to existing surgical and other therapeutic approaches.

A reawakening of interest in mechanisms of action of hyperbaric oxygen is leading to a better understanding of interactions of oxygen with toxins, antimicrobials, and various cellular functions and to the optimization of oxygen dosage in skin grafts and flaps and the crush injury syndrome.[38–40]

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# The Evolution of Injury Prevention and Surveillance at MIEMSS

*BELAVADI S. SHANKAR ScD, PATRICIA C. DISCHINGER PhD, and R ADAMS COWLEY MD*

**Although medical intervention for an injury at the acute stage has a long history of development and success in reducing death and disability, the concept of injury prevention is quite recent. We believe that integrating injury control programs with the activities of an EMS system offers the best chance for sustained efforts toward injury prevention.**

It once was widely believed that injurious accidents occur randomly (and thus unpredictably) and that such events were due to bad luck, carelessness, or punishment by God for sins. As a result of increased research and accumulated information, the causes of most of these injuries are known; therefore, they can be prevented. To eliminate the old myth, the word "accident" is consistently being replaced by "injury." In the case of motor vehicular "accidents," the term "crashes" would be more appropriate.

The magnitude of death and disability due to injury and its economic impact on the victims as well as on society has been very well established.[1] Injury is the leading cause of death and long-term disability among young Americans; between the ages of 15 and 34 years, almost 60 percent of all deaths are due to injury. The direct and indirect costs related to injury due to all causes total almost $100 billion annually.[2] Motor vehicle crashes are the leading cause of severe injury and death. Each year, injuries result in more than 140,000 deaths in the United States.

In Maryland, close to 50,000 people are admitted to a hospital each year with an injury, representing about 8 percent of hospitalizations for all causes. The rate of hospitalization varies by age and sex (Table 1). Although the rate of hospitalization for all injuries remained constant between 1980 and 1985, there was an increasing trend in hospitalization for severe injuries (Injury Severity Score[3] 13 or greater), a 28 percent increase during this period (Table 2). At the same time, the death rate due to injury showed a slight decline in all ages except among people 75 years old and over; that age-group registered an increase of about 18 percent (Table 3). More than half of injury deaths in the age-group 5 to 24 were due to vehicular crashes, and this has remained constant during the years studied despite numerous intervention strategies to reduce traffic fatalities.

The modern era of emergency medical services (EMS) and the civilian approach to improving trauma care (based on military experience) were initiated in the 1960s. The Maryland Institute for Emergency Medical Services Systems (MIEMSS) is one program that has pioneered the coordination of a statewide EMS/trauma care system. Since an effective injury prevention program requires a multidisciplinary approach with interagency cooperation and systematic data collection, MIEMSS added another dimension to its EMS efforts by introducing a program of injury prevention and surveillance.

## Prevention Program

Various injury prevention activities have been introduced in MIEMSS' ongoing EMS programs. These include an educational program aimed at the prevention of the recurrence of alcohol-related automobile crashes among teenagers, teaching parents to prevent playground injuries, and teaching pregnant women about the proper use of seat belts. Individuals from the institute systematically lobby for bills related to injury prevention. Successes include passage of laws mandating seat belt use, raising the legal drinking age from 18 to 21, and lowering the blood alcohol level (BAL) for driving while intoxicated from 0.13 mg/dl to 0.10 mg/dl.

In 1985, MIEMSS collaborated with the State Department of Health and Mental Hygiene to examine the problems of injury in Maryland. A statewide advisory committee was formed in September 1985, with Dr. R Adams Cowley as the chairperson and Professor Susan P. Baker as cochairperson. This committee consisted of representatives from the state legislature, injury researchers, emergency physicians, occupational safety leaders, police officers, and officials from the departments of transportation, health, and fire. The tasks of this committee were to

- examine existing injury prevention efforts, which are scattered and uncoordinated and thus have little impact on the overall incidence or outcome of injuries
- review existing data
- make recommendations

The advisory committee formed six subcommittees to address these areas of injury control: vehicular, domestic, sports/recreational, assaultive, occupational, and

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**Table 1. Number of Hospitalized Persons with an Injury, Maryland, 1980–1985**

| Year | Age | Male | Injury* Rate | Female | Injury* Rate |
|---|---|---|---|---|---|
| 1980 | 0–21 | 6,342 | 8.4 | 2,610 | 3.6 |
| | 22–44 | 6,753 | 9.3 | 2,655 | 3.5 |
| | 45–64 | 2,980 | 7.3 | 2,448 | 5.5 |
| | 65+ | 2,237 | 14.4 | 5,073 | 21.1 |
| 1981 | 0–21 | 6,316 | 8.5 | 2,555 | 3.5 |
| | 22–44 | 7,282 | 9.8 | 3,007 | 3.9 |
| | 45–64 | 3,200 | 7.8 | 2,669 | 6.0 |
| | 65+ | 2,436 | 15.3 | 5,652 | 22.9 |
| 1982 | 0–21 | 6,205 | 8.4 | 2,449 | 3.4 |
| | 22–44 | 7,308 | 9.6 | 3,199 | 4.0 |
| | 45–64 | 3,136 | 7.7 | 2,733 | 6.1 |
| | 65+ | 2,529 | 15.5 | 6,145 | 24.2 |
| 1983 | 0–21 | 5,880 | 8.1 | 2,356 | 3.4 |
| | 22–44 | 7,582 | 9.8 | 3,191 | 3.9 |
| | 45–64 | 3,088 | 7.5 | 2,679 | 6.0 |
| | 65+ | 2,575 | 15.5 | 6,100 | 23.4 |
| 1984 | 0–21 | 5,875 | 8.2 | 2,462 | 3.6 |
| | 22–44 | 8,023 | 10.1 | 3,544 | 4.3 |
| | 45–64 | 3,183 | 7.8 | 2,864 | 6.4 |
| | 65+ | 2,830 | 16.6 | 6,662 | 24.9 |
| 1985 | 0–21 | 5,621 | 7.9 | 2,229 | 3.3 |
| | 22–44 | 8,023 | 9.9 | 3,250 | 3.9 |
| | 45–64 | 2,900 | 7.1 | 2,303 | 5.1 |
| | 65+ | 2,527 | 14.5 | 6,314 | 23.0 |

*Sources:* Product of MIEMSS Injury Surveillance Program
Data from Health Services Cost Review Commission
*Note:* Patients with an ICD.9.CM between 800.00 and 959.99 given in any of the five available discharge diagnoses are included in this report.
* Injury rate per thousand persons

fire. Each subcommittee held numerous meetings and obtained input from various groups and experts in its area. An overwhelming enthusiasm among the participants was evident. Each subcommittee came up with many recommendations and presented them to the advisory committee. Considering such factors as the magnitude of impact in reducing death and disability and the feasibility of implementation, the committee made the following recommendations:

**1. To reduce vehicular injuries:**

- Promote passage of a *per se* law setting a BAL of 0.10 mg/dl as the legal limit consistent with driving while intoxicated.
- Prohibit probation for a second or subsequent offense of (*a*) driving while intoxicated and (*b*) driving under the influence of alcohol and/or drugs.
- Amend the present seat belt law to include all front-seat occupants and all belt-equipped vehicles and make nonuse of seat belts a primary offense.
- Require all motorcycle drivers and passengers to use helmets and require motorcyclists to keep their headlights on during the day.
- Mandate an administrative revocation law based on a finding by the Motor Vehicle Administration that a person drove a motor vehicle while having a BAL of 0.10 mg/dl or greater.
- Establish a mandatory penalty of license suspension for refusal to take a breathalyzer test.
- Amend the child safety law to extend the coverage to other vehicle types and out-of-state vehicles.
- Require all new vehicles purchased by state and local agencies to be equipped with passive restraints (air bags or passive belts).
- Incorporate pedestrian protection in all transportation land use and commercial development planning, with appropriate documentation.
- Increase sobriety checkpoints and selective enforcement programs.

**2. To prevent injuries in the domestic setting:**

- Design a model home for public display, portraying "The Safe Home of Today and Tomorrow." This model would display state-of-the-art designs and equipment for safety and would provide the impetus for consumers to implement safety adaptations in their own environments. Encourage the Real Estate Board to develop a rating scale for safety in order to bring special attention to safety features

in the home (similar to the energy efficiency rating scale).
- Require safety information and warning labels on products that can be associated with domestic falls, for example, baby walkers.
- Provide clearly designated curbs and steps in public places.
- Institute statewide public educational programs on safety hazards and methods of modifying the environment, targeted at high-risk groups such as preschool children and elderly women.
- Require manufacturers of all toxic substances for domestic use sold in Maryland to modify packaging according to "child-proof" standards.
- Continue to support the Maryland Poison Center in data collection and analysis and in public and professional education.

**3. To prevent sports/recreational injuries:**
- Develop a statewide agency (perhaps a joint office of the Departments of Health and Mental Hygiene, Natural Resources, and Education) to oversee data collection, make recommendations, and develop programs to decrease injuries from informal recreational activities and from interscholastic, intercollegiate, and semiprofessional sports.
- Develop and fund a bicycle helmet campaign.
- Support the Maryland Alcohol and Water Safety Initiative and encourage Maryland jurisdictions to adopt the Consumer Product Safety Commission's recent recommendations as their building plan inspection standard for swimming pools.
- Require that all BB guns and air rifles sold in Maryland display prominent warning labels emphasizing their lethality.
- Distribute playground design recommendations (similar to those of the Consumer Product Safety Commission) and encourage local jurisdictions to ensure that playgrounds meet or exceed those standards.
- Support legislation requiring monetary deposits for glass beverage containers.

**4. To control injuries due to assault:**
- Amend the Maryland law that preempts the right of local jurisdictions to pass laws regulating the manufacture, sale, or possession of weapons, so that Baltimore City or other jurisdictions can pass laws that are more stringent than state laws.
- Expedite research on firearm-related injuries to include data on the specific type of weapons involved in firearm deaths and injuries.
- Ban the sale of handgun ammunition, except for use in target shooting establishments or on prescription from police.
- Increase the mandatory penalties for possession and/or use of deadly weapons in a crime and for possession of an illegal weapon.

**5. To reduce work-related injuries:**
- Integrate a formal course on safety and injury at work into universities, community colleges, and technical schools.
- Require the use of seat belts in all belt-equipped vehicles and develop company programs to increase employee belt use.
- Create a statutory requirement of accountability for all government agencies to report occupational injuries to the Commissioner of Labor and Industry. The report should summarize the nature of incidents and actions taken to reduce the occurrence of similar accidents.
- Develop and implement continuing education instruction for safety and health personnel, managers, and government employees specific to occupational accidents. Expand on what is presently being done by the Safety Council of Maryland in this area. Develop incentives on the state and federal levels to encourage employers to participate in programs to reduce injuries. Such incentives could include tax considerations, subsidies of grants to educational institutions, tuition remissions, and insurance incentives.
- Include volunteer fire/rescue personnel under the Maryland Occupational Safety and Health Act.

**Table 2. Injury Severity Scores (ISS) of Injured Persons Hospitalized, Maryland, 1980–1985**

| Year | $1 \leq ISS \leq 12$ | $13 \leq ISS \leq 24$ | $25 \leq ISS \leq 35$ | $ISS \geq 36$ | Total |
|---|---|---|---|---|---|
| 1980 | 26,827 | 3,556 | 690 | 100 | 31,173 |
| 1981 | 28,473 | 3,900 | 803 | 106 | 33,282 |
| 1982 | 28,896 | 3,882 | 805 | 121 | 33,704 |
| 1983 | 28,685 | 3,806 | 807 | 154 | 33,452 |
| 1984 | 30,150 | 4,242 | 884 | 168 | 35,444 |
| 1985 | 27,599 | 4,288 | 1,096 | 206 | 33,189 |

*Source:* Data from Health Services Cost Review Commission
Only mechanical injuries are included

## Table 3. Age-Specific Death Rates (per 100,000 persons), Maryland, 1979–1985

| Age (Year) | Type of Injury Causing Death | Year | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
| <1 | All injuries | 32.5 | 28.4 | 20.9 | 27.4 | 33.7 | 23.2 | 27.7 |
| | Vehicular | 7.2 | 5.3 | 7.0 | 5.1 | 6.7 | 1.7 | 3.3 |
| | Poisoning | 0.0 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Fall | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 0.0 | 0.0 |
| | Fire | 5.4 | 7.1 | 1.7 | 8.6 | 3.4 | 6.6 | 4.9 |
| | Suicide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Homicide | 5.4 | 7.1 | 5.2 | 6.9 | 5.1 | 8.3 | 6.5 |
| | Drowning | 3.6 | 1.8 | 0.0 | 3.4 | 1.7 | 1.7 | 1.6 |
| | Other injuries | 10.8 | 7.1 | 5.2 | 3.4 | 15.2 | 5.0 | 11.4 |
| | All causes* | 1527.4 | 1495.5 | 1377.7 | 1313.4 | 1256.4 | 1197.9 | 1322.2 |
| 1–4 | All injuries | 19.8 | 17.1 | 22.3 | 19.3 | 17.2 | 14.7 | 17.5 |
| | Vehicular | 5.2 | 5.6 | 7.7 | 7.2 | 2.2 | 3.5 | 3.0 |
| | Poisoning | 0.0 | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Fall | 0.0 | 1.4 | 0.0 | 1.3 | 0.9 | 0.9 | 0.9 |
| | Fire | 5.2 | 1.9 | 5.9 | 4.5 | 5.7 | 4.3 | 7.7 |
| | Suicide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Homicide | 2.4 | 1.4 | 2.7 | 3.1 | 4.4 | 0.0 | 2.1 |
| | Drowning | 4.7 | 1.9 | 3.6 | 2.2 | 1.8 | 3.9 | 2.1 |
| | Other injuries | 2.4 | 4.2 | 1.4 | 1.3 | 2.2 | 3.0 | 1.7 |
| | All causes* | 60.4 | 49.6 | 57.4 | 52.8 | 52.0 | 44.6 | 52.9 |
| 5–14 | All injuries | 12.2 | 11.2 | 11.5 | 17.9 | 12.5 | 12.0 | 12.6 |
| | Vehicular | 5.4 | 5.4 | 5.4 | 6.0 | 6.1 | 5.4 | 6.9 |
| | Poisoning | 0.2 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 |
| | Fall | 0.3 | 0.0 | 0.2 | 0.5 | 0.0 | 0.3 | 0.0 |
| | Fire | 1.8 | 0.9 | 1.4 | 3.9 | 2.0 | 2.0 | 2.3 |
| | Suicide | 0.6 | 0.2 | 0.3 | 1.3 | 1.0 | 1.2 | 0.7 |
| | Homicide | 0.6 | 1.5 | 1.4 | 2.1 | 1.3 | 1.5 | 0.7 |
| | Drowning | 1.2 | 2.3 | 1.7 | 2.3 | 1.3 | 0.8 | 0.4 |
| | Other injuries | 1.4 | 0.8 | 1.1 | 1.8 | 0.8 | 0.7 | 1.6 |
| | All causes* | 25.9 | 24.9 | 23.1 | 29.8 | 22.6 | 24.1 | 23.9 |
| 15–24 | All injuries | 70.5 | 80.8 | 76.6 | 74.3 | 62.7 | 63.5 | 68.1 |
| | Vehicular | 33.1 | 40.9 | 38.2 | 34.6 | 29.2 | 29.5 | 34.4 |
| | Poisoning | 0.1 | 1.0 | 1.3 | 0.6 | 0.3 | 0.7 | 1.1 |
| | Fall | 1.2 | 1.1 | 0.1 | 1.7 | 0.7 | 0.4 | 1.3 |
| | Fire | 0.7 | 2.0 | 0.5 | 1.2 | 1.7 | 0.9 | 0.5 |
| | Suicide | 13.2 | 12.3 | 11.5 | 13.1 | 11.9 | 12.7 | 11.6 |
| | Homicide | 13.6 | 16.6 | 16.4 | 16.2 | 13.4 | 15.5 | 13.4 |
| | Drowning | 4.3 | 3.0 | 3.3 | 4.4 | 2.6 | 1.4 | 2.9 |
| | Other injuries | 4.1 | 3.9 | 5.3 | 2.6 | 3.0 | 2.4 | 2.9 |
| | All causes* | 95.5 | 108.1 | 106.0 | 100.0 | 86.9 | 89.1 | 91.0 |
| 25–34 | All injuries | 64.4 | 71.0 | 67.4 | 62.3 | 62.0 | 59.7 | 61.2 |
| | Vehicular | 23.0 | 25.4 | 23.0 | 22.0 | 22.6 | 19.8 | 21.2 |
| | Poisoning | 1.0 | 1.8 | 1.1 | 1.1 | 0.9 | 1.3 | 2.2 |
| | Fall | 1.5 | 1.1 | 1.9 | 1.8 | 0.5 | 1.1 | 1.1 |
| | Fire | 0.7 | 1.2 | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 |
| | Suicide | 15.2 | 1.5 | 16.4 | 13.2 | 15.9 | 15.2 | 13.3 |
| | Homicide | 18.5 | 18.5 | 19.4 | 16.7 | 15.6 | 16.3 | 17.1 |
| | Drowning | 1.4 | 3.5 | 2.1 | 2.2 | 2.0 | 2.1 | 2.1 |
| | Other injuries | 3.1 | 4.3 | 2.2 | 4.1 | 3.1 | 2.8 | 2.8 |
| | All causes* | 122.7 | 132.9 | 126.8 | 127.2 | 122.0 | 124.3 | 130.4 |
| 35–44 | All injuries | 55.7 | 48.4 | 50.8 | 50.6 | 49.8 | 43.1 | 48.0 |
| | Vehicular | 14.9 | 16.1 | 15.4 | 17.0 | 16.3 | 13.0 | 14.8 |
| | Poisoning | 0.2 | 1.0 | 0.7 | 0.5 | 1.0 | 1.4 | 1.7 |
| | Fall | 2.8 | 1.7 | 3.3 | 1.9 | 1.5 | 1.4 | 1.5 |
| | Fire | 1.8 | 2.3 | 0.9 | 3.1 | 1.2 | 1.6 | 1.1 |
| | Suicide | 14.5 | 13.5 | 15.2 | 11.6 | 14.2 | 11.4 | 14.7 |
| | Homicide | 15.3 | 9.7 | 12.0 | 12.2 | 10.0 | 10.7 | 9.4 |
| | Drowning | 1.8 | 0.8 | 0.9 | 1.0 | 1.7 | 0.3 | 1.7 |
| | Other injuries | 4.4 | 3.4 | 2.4 | 3.1 | 4.0 | 3.2 | 3.1 |
| | All causes* | 236.3 | 208.5 | 207.9 | 202.0 | 200.0 | 198.3 | 200.6 |
| 45–54 | All injuries | 48.7 | 54.2 | 54.8 | 50.0 | 45.6 | 39.4 | 49.0 |
| | Vehicular | 12.7 | 13.0 | 17.7 | 14.9 | 13.1 | 12.2 | 15.4 |
| | Poisoning | 0.9 | 0.7 | 0.2 | 0.2 | 1.1 | 0.2 | 1.8 |
| | Fall | 2.9 | 5.4 | 4.7 | 4.1 | 3.6 | 3.4 | 3.4 |
| | Fire | 2.7 | 2.7 | 2.0 | 2.3 | 1.6 | 2.0 | 2.3 |
| | Suicide | 14.1 | 15.2 | 14.6 | 14.9 | 13.1 | 8.1 | 12.5 |
| | Homicide | 8.9 | 11.2 | 10.6 | 9.2 | 7.7 | 6.1 | 5.2 |
| | Drowning | 1.3 | 1.1 | 1.1 | 1.1 | 0.9 | 1.1 | 1.1 |
| | Other injuries | 5.1 | 4.9 | 3.8 | 3.4 | 4.5 | 6.1 | 7.3 |
| | All causes* | 618.2 | 593.5 | 583.1 | 556.8 | 554.6 | 518.7 | 542.2 |
| 55–64 | All injuries | 52.7 | 65.8 | 52.5 | 53.7 | 51.5 | 47.8 | 58.6 |
| | Vehicular | 14.7 | 19.4 | 15.8 | 15.9 | 14.2 | 13.1 | 15.7 |
| | Poisoning | 0.8 | 0.5 | 0.5 | 0.5 | 0.7 | 1.5 | 1.7 |
| | Fall | 5.7 | 8.4 | 6.9 | 4.4 | 3.7 | 4.6 | 5.1 |
| | Fire | 2.7 | 2.0 | 2.0 | 3.4 | 2.0 | 2.4 | 2.4 |
| | Suicide | 14.2 | 18.4 | 15.1 | 15.9 | 17.6 | 13.3 | 15.4 |
| | Homicide | 7.7 | 7.4 | 4.7 | 6.4 | 6.1 | 3.4 | 6.0 |
| | Drowning | 3.0 | 2.5 | 1.2 | 1.2 | 1.5 | 0.5 | 0.7 |
| | Other injuries | 3.7 | 7.2 | 6.4 | 5.9 | 5.9 | 9.0 | 11.6 |
| | All causes* | 1436.1 | 1445.7 | 1416.4 | 1405.9 | 1380.2 | 1370.7 | 1407.4 |
| 65–74 | All injuries | 72.7 | 68.8 | 69.0 | 59.9 | 55.3 | 72.6 | 69.1 |
| | Vehicular | 16.5 | 16.6 | 19.4 | 14.8 | 11.8 | 16.5 | 17.6 |
| | Poisoning | 0.8 | 0.4 | 0.8 | 0.8 | 0.8 | 3.0 | 1.5 |
| | Fall | 14.9 | 13.8 | 13.9 | 8.6 | 6.1 | 12.0 | 9.9 |
| | Fire | 4.5 | 5.7 | 6.3 | 3.1 | 6.9 | 5.2 | 4.0 |
| | Suicide | 16.5 | 15.0 | 16.3 | 20.2 | 17.2 | 16.1 | 15.1 |
| | Homicide | 6.6 | 5.3 | 3.2 | 3.1 | 3.8 | 4.5 | 2.2 |
| | Drowning | 2.1 | 0.8 | 2.8 | 0.4 | 0.0 | 0.8 | 1.1 |
| | Other injuries | 10.7 | 11.3 | 6.3 | 8.9 | 8.8 | 14.6 | 17.6 |
| | All causes* | 3247.1 | 3262.0 | 3214.9 | 3147.5 | 3199.3 | 3162.0 | 3200.3 |
| 75 & over | All injuries | 172.1 | 157.0 | 139.1 | 119.9 | 139.6 | 193.9 | 202.1 |
| | Vehicular | 29.4 | 22.9 | 21.5 | 18.8 | 19.4 | 28.8 | 27.9 |
| | Poisoning | 3.5 | 0.7 | 2.6 | 1.9 | 1.2 | 1.8 | 6.3 |
| | Fall | 70.7 | 79.5 | 68.3 | 49.6 | 49.8 | 64.1 | 57.5 |
| | Fire | 14.0 | 14.8 | 4.6 | 11.3 | 11.5 | 7.6 | 12.0 |
| | Suicide | 19.6 | 16.2 | 15.6 | 15.7 | 17.6 | 22.9 | 23.3 |
| | Homicide | 7.0 | 3.4 | 5.9 | 6.9 | 4.3 | 4.7 | 5.1 |
| | Drowning | 2.8 | 2.0 | 2.0 | 2.5 | 1.2 | 1.2 | 2.3 |
| | Other injuries | 25.2 | 17.5 | 18.9 | 13.2 | 34.6 | 62.9 | 67.8 |
| | All causes* | 8637.8 | 9038.4 | 8790.5 | 9980.5 | 8893.3 | 8847.2 | 8883.0 |

*Source:* Product of MIEMSS Injury Surveillance Program

* Rate of death due to all causes (injury and noninjury)

- Encourage public and private employers to prohibit radar detectors in business vehicles.

6. **To reduce burn injuries:**
   - State fire codes should mandate that smoke detectors be supplied, installed, and maintained by the owners of all dwellings, whether single or multiple units.
   - State fire codes should require that sprinkler systems be installed in designated areas in all new homes.
   - Implement a mandatory safety lesson plan developed by the National Fire Protection Agency into the public schools to teach appropriate behaviors in fire and burn situations and to reduce ignition sources. Implement a Fire Watch program to be piggybacked onto the Crime Watch program for adult educational purposes. The program should include instruction on the reduction of primary ignition sources, the installation and maintenance of smoke detectors, and escape routes.
   - Implement a Battery for Life Program to distribute smoke detector batteries free of charge.
   - Regulate and monitor water temperature settings so they do not exceed 120°F in state-regulated facilities (for example, hospitals, nursing homes, and housing for the elderly). Promote a public education campaign that would include a supplemental flier in gas and electric billings that advises homeowners of the hazards of having water heater thermostats set higher than 120°F and of the savings resulting from reduced temperature.

Planning, implementation, and evaluation of any injury control program require adequate data. Recognizing this fact, the advisory committee made the following recommendations:

- The Health Services Cost Review Commission should mandate collection of E-code data (ICD codes for the cause of injury) on the etiology of injuries for hospitalized patients.
- There should be a central agency in the state responsible for collecting injury surveillance data on an ongoing basis and making them available to all users.
- Special studies, evaluation, and focused data collection by a variety of public and private agencies should be instituted and expanded to achieve the recommendations of this report.
- Necessary funding should be appropriated by the legislature for the implementation of the recommendations of this committee.

## Projects at MIEMSS

With funding from the National Highway Traffic Safety Administration (NHTSA), the Maryland Department of Transportation (DOT), and the Maryland Department of Health and Mental Hygiene (DHMH), MIEMSS has been conducting a number of projects related to research on and surveillance of injury in the state. These are some of them:

*Motorcycle Injury Study* A one-year study of all motorcycle-related injuries in the state, linking crash data from the State Police, prehospital EMS data, and hospital outpatient and inpatient data, is under way. It is expected that this project, funded by NHTSA, will provide information for injury control (for example, mandated helmet use), evaluation of the EMS/trauma care system, and research.

*Injury Surveillance Project* Using routinely collected data within the state EMS/trauma care system as well as other state and national data, a systematic data analysis and reporting mechanism is being developed. The results of this project, funded by the state DHMH, will be available soon to researchers as well as planners of injury prevention programs.

*Fatal Vehicular Injuries and Alcohol/Drug Database* In a project funded by state and federal DOTs, crash data, autopsy data, and clinical information from all trauma centers (including toxicology screening results) are linked for each victim to provide better information to plan primary, secondary, as well as tertiary prevention of vehicular trauma.

*Tracking Traumatic Injuries that Result in Long-Term Disability* In 1984, the state legislators passed a law that requires all hospitals to provide timely information on all patients admitted with head and spinal cord injuries, traumatic amputation, and stroke so these victims could be informed of the availability and accessibility of appropriate rehabilitation services. The intent is to prevent further complications and to bring the recoverees to full functional status as soon as possible. MIEMSS has been providing the services of data collection and analysis and has been informing the patients/families of the availability of rehabilitation services.

## Summary

Integrating injury control programs with the activities of an EMS system offers the best chance for sustained efforts toward injury prevention. A system such as MIEMSS, with central coordination, training, and

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data collection, will provide the ideal environment for surveillance, research, and evaluation. In collaboration with other academic institutions and governmental agencies, a model program for injury control can be developed and tested. Such a program can also be used as a laboratory for teaching injury control curricula.

## References

1. Cowley, RA. "Maryland's Med-Evac Helicopter Program." In *Operational Helicopter Aviation Medicine*, proceedings of the Advisory Group for Aerospace Research and Development, North Atlantic Treaty Organization, 1978.

2. *Injury in America: A Continuing Public Health Problem.* Committee on Trauma Research, Commission of Life Sciences, National Research Council and the Institute of Medicine. Washington, DC: National Academy Press, 1985.

3. *The Abbreviated Injury Scale: 1985 Revision.* Committee on Injury Scaling. Morton Grove, IL: American Association for Automotive Medicine, 1985.

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# Physician Education in Trauma: A Comprehensive Program

*CHARLES E. WILES III MD and BURTON H. KAPLAN MD*

**Training and research in trauma have been identified by the American College of Surgeons' Committee on Trauma* as essential components of a Level I trauma center. At MIEMSS, education is second only to quality patient care in priority. Much staff time and many of the institute's resources are committed to improving trauma care by educating professionals from many disciplines.**

## Fellowships

The keystone of MIEMSS physician education always has been its fellowship programs. Aimed at physicians who have completed training in their primary specialty, MIEMSS fellowships are intended to develop national and international leaders in the various aspects of trauma care. Fellowships are offered in general surgery/traumatology, critical care, orthopedic traumatology, neurotrauma, trauma anesthesiology, trauma plastic surgery and maxillofacial reconstruction, infectious disease medicine, hyperbaric medicine, and trauma research. In general, MIEMSS fellowships are one year in duration, but shorter and longer programs have been arranged. There is also the potential for overlapping two or more specialty interest areas in the course of a fellowship year. For example, an anesthesiologist may elect to do six months of trauma anesthesia and six months of critical care medicine. Most of the fellowship programs (with the exception of the research fellowship) are primarily clinical, although clinical research is strongly encouraged.

The general surgery/traumatology fellowship is the oldest fellowship program of MIEMSS. Graduates have established themselves as regional, national, and international leaders in trauma care. The program is designed to give board-eligible or board-certified general surgeons an intensive clinical exposure to critically injured patients. The second major goal of the fellowship is to expose the fellows to the intricacies of prehospital care, trauma center designation, trauma research efforts, and all the other areas a director of trauma must cover in a Level I or II trauma center. Trauma fellows are the team leaders on the trauma teams, which are the centerpieces of the Shock Trauma Center's clinical program.

The critical care fellowship is designed to encourage board-certified or board-eligible internists, anesthesiologists, and surgeons to develop the special skills of trauma critical care. These fellows devote their time and energy to the minute-to-minute management of the sickest patients in the Shock Trauma Center. They work closely with the trauma teams and with the various support and specialty services. It is their task to integrate and expedite the care of the patients in the critical care areas. Elective time in the critical care program usually is spent fulfilling certification requirements or in exploring areas of particular interest such as hyperbaric medicine.

Fellowships in orthopedic trauma and neurotrauma are intended for fully qualified specialists in orthopedics and neurosurgery who desire to become experts in trauma care. These fellowships, like most MIEMSS fellowships, concentrate on direct patient care. Fellows are given a concentrated exposure to very seriously injured patients. They become expert in the problems of the multiply injured patient. Fellows also are encouraged to pursue their own research goals or to involve themselves in ongoing departmental efforts.

The trauma plastic surgery and infectious disease medicine fellows are physicians who are pursuing a second area of specialization. The plastic surgeons are part of the Johns Hopkins program in plastic surgery. Their MIEMSS experience is a vital part of their superspecialty training. The infectious disease medicine fellows are internists from the University of Maryland. Their trauma rotation provides intensive exposure to the complications of major trauma.

Physicians with a particular interest in hyperbaric medicine or trauma research may arrange fellowship time at the institute. Special relationships for research fellows have been developed with the Catholic University of the Sacred Heart in Rome and the Hadassah University in Jerusalem.

## Residents

MIEMSS represents a valuable educational resource for the residents of the University of Maryland and many other medical centers (Table). University of Maryland resident physicians from the department of surgery, division of general surgery, orthopedics, and

* American College of Surgeons, Committee on Trauma. "Hospital and Prehospital Resources for Optimal Care of the Injured Person." *Bull Am Coll Surg* 71(10)(1986):4–12.

Dr. Wiles is Director of the Critical Care Recovery Unit and a Surgical Traumatologist/Intensivist at the Shock Trauma Center, MIEMSS. Dr. Kaplan is Director of Graduate Medical Education at MIEMSS. Reprints: Charles E. Wiles III, MD, MIEMSS, 22 S. Greene St., Baltimore, MD 21201-1595.

neurosurgery rotate on a regular basis through the Shock Trauma Center, as do residents from the oral-maxillofacial surgery program, a combined Maryland-Hopkins service. Other Maryland residents may see patients when their services are called in consultation. MIEMSS also is committed to being an educational resource to other training programs. In 1987, residents from 24 programs rotated through the center on various services. The four general surgery/trauma teams usually have four residents each: two from general surgery programs and two from emergency medicine programs. The objective of this two-month rotation is to familiarize these residents at the second- or third-year level with the principles of trauma resuscitation and evaluation. They also follow their patients throughout the period of hospitalization at MIEMSS to learn comprehensive care of the trauma patients.

Residents from five programs rotate on a routine basis through the orthopedic trauma service to learn the special care of complicated musculoskeletal injuries. Residents also may rotate in the critical care units or the neurosurgical service on an individually arranged basis.

### Students

Each of the trauma teams can accept one student per month as a senior-year elective. Electives on other services and in research have been arranged on an individual basis. Students may come from any accredited institution, but most students rotating through MIEMSS come from the Uniformed Services University of the Health Sciences, University of Maryland, or Johns Hopkins University. Only senior students are encouraged to apply for MIEMSS rotations.

**Table. Residency Programs Utilizing MIEMSS Resources (1987)**

Akron City Hospital, Akron, OH
Akron General Medical Center, Akron, OH
Conemaugh Valley Memorial Hospital, Johnstown, PA
Department of the Army, Walter Reed Army Medical Center, Washington, DC
Department of the Navy, Naval Hospital, Bethesda, MD
Detroit Osteopathic Hospital, Highland Park, MI
East Carolina University, School of Medicine, Greenville, NC
Fitzsimmons Army Medical Center, Aurora, CO
Georgetown University Hospital, Washington, DC
George Washington University Medical Center, Washington, DC
Good Samaritan Hospital, Cincinnati, OH
Hospital for Joint Disease, New York, NY
Memorial Hospital Osteopathic Medical Care, York, PA
Milton S. Hershey Medical Center, Hershey, PA
New England Deaconess Hospital, Boston, MA
Royal Victoria Hospital, Montreal
St. Agnes Hospital, Baltimore, MD
The Johns Hopkins Hospital, Baltimore, MD
The Mt. Sinai Medical Center, Cleveland, OH
The Ohio State University, Columbus, OH
The Union Memorial Hospital, Baltimore, MD
The University of Maryland, Baltimore, MD
University of Health Sciences, Chicago Medical School, Chicago, IL
University of Pittsburgh School of Medicine, Pittsburgh, PA

### Visiting Physicians

Two programs are available for physicians interested in spending time at MIEMSS. The Visiting Physician Program is for those interested in a brief visit to the Shock Trauma Center. More than 70 physicians took advantage of this program in 1987. The Refresher Program offers a one- to six-month rotation for practicing physicians interested in improving their proficiency in trauma care. In 1987, four physicians participated in the Refresher Program. Arrangements for both these programs can be made through the office of the Director of Graduate Medical Education.

### Core Curriculum

MIEMSS provides a repeating 55-hour cycle of didactic lectures in trauma care for all physicians rotating through MIEMSS. This program includes the skills laboratory, where essential procedures are taught to the resident cadre using fresh cadavers as subjects. Advanced procedures are practiced with the trauma fellows in the cadaver lab as well. Less formal instruction is provided during daily rounds and in the critical care morning report sessions. A weekly morbidity and mortality conference is held; specialty problems also are discussed in department conferences. Grand Rounds in trauma are held weekly. Once a month, a notable visiting professor conducts Grand Rounds. Biweekly Journal Club luncheons are held for the fellows, and a Transition to Practice Seminar is conducted each spring.

### External Programs

Advanced Trauma Life Support (ATLS) programs are offered almost monthly at MIEMSS. Courses are offered at both the provider and instructor levels and usually are fully booked. The ATLS program provides a basic trauma background, which is especially valuable to physicians working in emergency department situations.

The National Trauma Symposium has been held annually for ten years. This meeting has become the convention for trauma systems. In 1987, more than 650 health care professionals attended this major fall event.

From time to time, MIEMSS, often in conjunction with the Charles R. McC. Mathias, Jr. National Study Center for Trauma and EMS, sponsors programs of

special interest to various segments of the trauma care community. Recent programs for physicians include seminars and courses on trauma registries, orthopedic reconstruction, facial reconstruction, and trauma anesthesia. Programs have been held from Massachusetts to South Carolina, although most are based in Baltimore. Other external educational efforts designed for nurses, field providers, and administrators are part of the comprehensive MIEMSS educational effort.

Within the past year, MIEMSS has contributed significant support to the American Trauma Society's programs and to the Fifth World Congress on Emergency and Disaster Medicine held in Rio de Janeiro.

In addition to the educational efforts described above, the MIEMSS faculty vigorously pursue clinical and basic research as part of their mission. The results of those efforts appear regularly in appropriate journals, and the MIEMSS faculty continually make presentations at national and international meetings.

Six textbooks have been edited or written recently by the Shock Trauma group; MIEMSS physicians and nurses regularly contribute to other textbooks. Many MIEMSS staff are popular speakers at home and on the road.

Education is the keystone of excellent trauma care. As a major trauma center, MIEMSS attempts to provide exceptional trauma training. The impact of these efforts is felt far beyond the Maryland state line.


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## Professional Rehabilitation: Intervention & Treatment

**Friday, September 23, 1988**
**Hunt Valley Inn 8:45 a.m.–5:00 p.m.**

***Keynote speaker: Dr. Vernon E. Johnson, founder and President Emeritus of the Johnson Institute in Minneapolis, Minnesota. This program is sponsored by Med-Chi in cooperation with The Health and Education Council.***

**Early registration $100, after September 2, $110**
**6.5 Cat I CME credits**

**Info: Don Neilenson (Health and Education Council) 301-686-3610**
**JoAnn Cirillo (Med-Chi) 1-800-492-1056 or 301-539-0872**

### Miscellaneous Meetings

**Temple University School of Medicine** sponsors a series of weekend summer conferences to be held at Timberline Four Seasons Resort in Canaan Valley WV. 9 hrs Cat I credits. Regis & info: K. Saumure 215-387-3685.

**Jul 22–24 Pulmonary and Thoracic Diseases**

**Jul 29–31 Cardiovascular Complications in Diabetes**

**Aug 5–7 Venous Insufficiency of the Lower Extremity**

**Aug 12–14 Physician Update on Cancer, AIDS, and Liver Disease**

**Aug 19–21 Advances in Cardiology**

**Aug 26–28 Lasers in Medical Practice**

**Sep 9–11 New Antibiotics for Life-Threatening Infections**

**Sep 16–18 Interventional Radiology**

**Jul 28 Neuropsychiatric Aspects of AIDS.** Grand Rounds, Shady Grove Adventist Hospital.

**Sep 17–19 American Society for Reconstructive Microsurgery Fourth Annual Meeting,** Lord Baltimore Hotel, Baltimore, MD. Fees before August 1: active members $300, associate & corresponding members $175, nonmembers $300, residents & fellows $175; thereafter: active members $325, associate & corresponding members $175, nonmembers $325, residents & fellows $175. Info: ASRM, 3025 S. Parker Rd.—Ste 65, Aurora, CO 80014.

**Sep 23 Impaired Professionals: Intervention and Treatment** Marriott Hunt Valley Inn, Hunt Valley, MD. Sponsored by Med-Chi in cooperation with the Health Education Council. Info: Jo Ann Cerillo 301–539-0872.

**Sep 24 Physicians' Cholesterol Education Program,** The Annapolis Ramada, 173 Jennifer Rd., Annapolis, MD. Info: 301–685-7074 or 225-5891.

**Sep 29–30 American College of Nuclear Physicians & Society of Nuclear Medicine Joint Symposium on Biology of Radionuclide Therapy,** Loews L'enfant Plaza Hotel, Washington, DC. Fees by September 6, members $195, nonmembers $215, technologists (members) $75, technologists (nonmembers) $105; thereafter: members $215, nonmembers $235, technologists (members), $95, technologists (nonmembers) $125. Info: G.S. Dikeos, ACNP, 1101 Connecticut Ave. NW—Ste 700, Washington, DC 20036 (202-857-1135).

**Oct 3–5 NIH Consensus Development Conference: Urinary Incontinence in Adults,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852.

**Oct 22 The Second Annual John C. Dumler OB/GYN Update,** St. Agnes Hospital, Baltimore, MD. Sponsored by the Depts of OB/GYN at St. Agnes Hospital and University of Maryland School of Medicine. Info: T. Young 301–328-2399.

**Oct 26 Physicians' Cholesterol Education Program,** The Ramada Inn, 901 Dual Highway, Hagerstown, MD. Info: 301-685-7074 or 225-5891.

**Nov 9–11 First National Cholesterol Conference,** Hyatt Regency Crystal City, Arlington, VA. Advance registration $150; conference participation limited to first 1,000 registrants. Info: The National Cholesterol Conference, 4733 Bethesda Ave.—Ste 530, Bethesda, MD 20814 (301-951-3275).

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### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–1988. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Sep 8–10 Intensive Training in Spirometry Testing,** sponsored by JHU School of Hygiene and Public Health. Fee: $450; AMA Cat I credits and CEUs available. Info: J. Corn 301-955-2609.

**Sep 15–16 Pediatrics for the Practitioner, Update '88.** Fees: physicians $200, nurses/practitioners & retired physicians $135; 14.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course** (on-going-1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/11/88–12/5/88. Info: Celia Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer 8/8–12, 11/14–18. Fee $460. AMA Cat I credits.

**Advanced Practicum in Ultrasound** 12/5–9. Fee: $460; 40 AMA Cat I credits.

**Visiting Physicians** is offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. Fee: $460; 40 AMA Cat I credits.

**Johns Hopkins Medical Grand Rounds:** Accredited audiovisual continuing education series of case discussion for clinicians: 30 topics/year in 5 bimonthly programs. Individual and group subscriptions; 40 AMA Cat I credits. Info: 301-955-3988.

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### University of Maryland School of Medicine

**CME Courses:** For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**Aug 11 Focus on Infection 1988,** UMBC, Medical School Teaching Facility Auditorium. Fee: $25; 6 AMA Cat I credits.

**Sep 16–17 Topics in Geriatrics,** The Royce Hotel at BWI International Airport, Linthicum. Fee and credits TBA.

**Sep 22 Dean's Conference #1: Dermatology,** UMBC, Medical School Teaching Facility, Baltimore. Fee: $25; 6 AMA Cat I credits.

**Sep 23 Current Concepts in Ophthalmology: Eighth Annual Clinical Conference,** Hyatt Regency Baltimore. Fee: $60; 6 AMA Cat I credits.

**Oct 14–15 Roots of Creativity: The Study of Creative Imagination in Infancy,** Omni International Hotel, Baltimore. Fee: TBA; 6 AMA Cat I credits.

**Oct 20 Dean's Conference: #2: AIDS,** UMBC, Medical School Teaching Facility Auditorium, Fee: $25; 6 AMA Cat I credits.

**Oct 27–29 Fourth Annual University of Maryland Contact Lens Symposium,** Hyatt Regency Inner Harbor, Baltimore. Fee: $160; 12.25 AMA Cat I credits.

**Visiting Professor Program** Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

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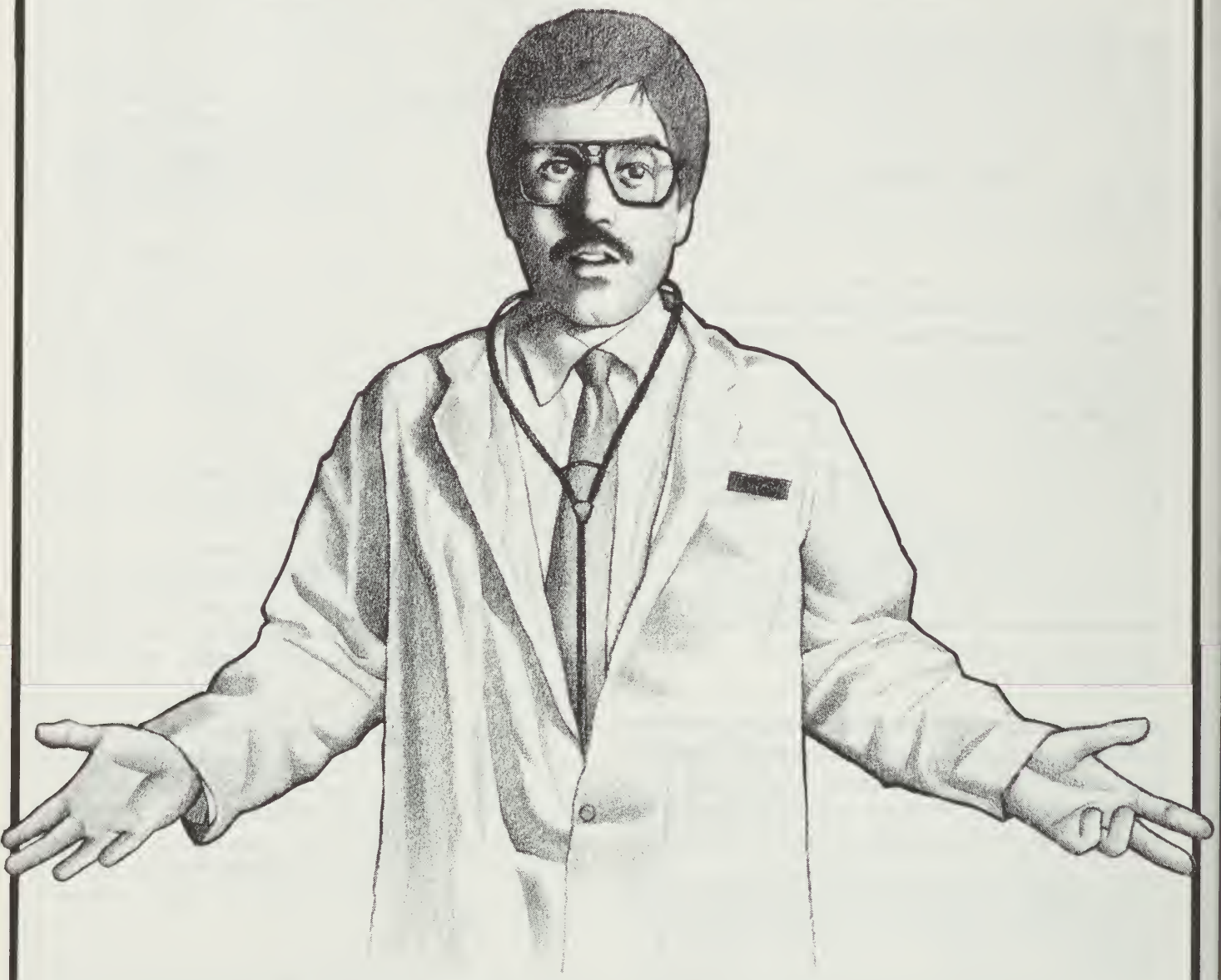
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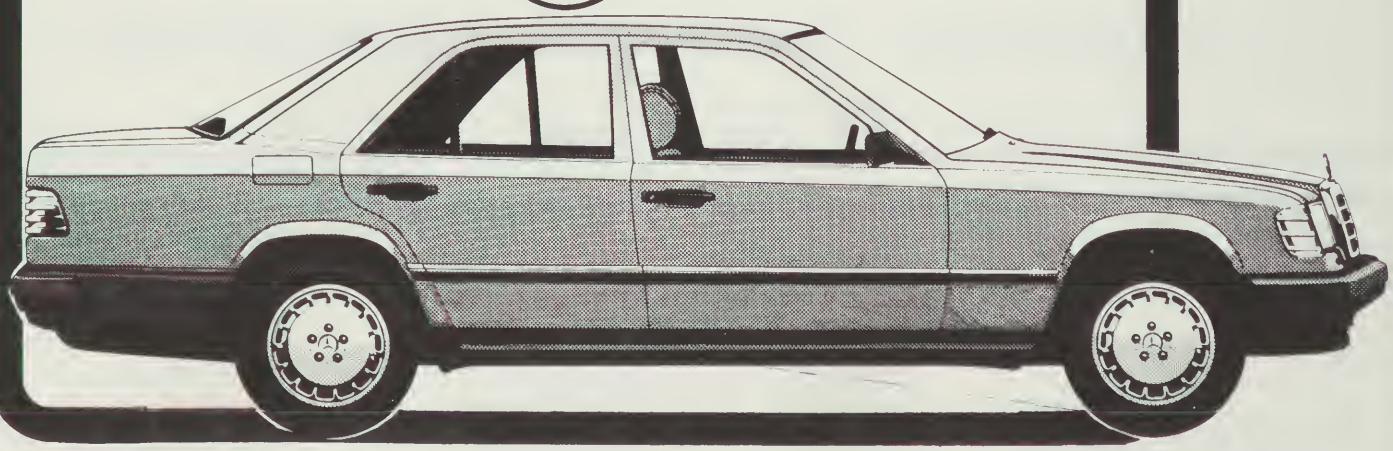
**Committees' Annual Reports**




# A DELIGHTFUL DICHOTOMY

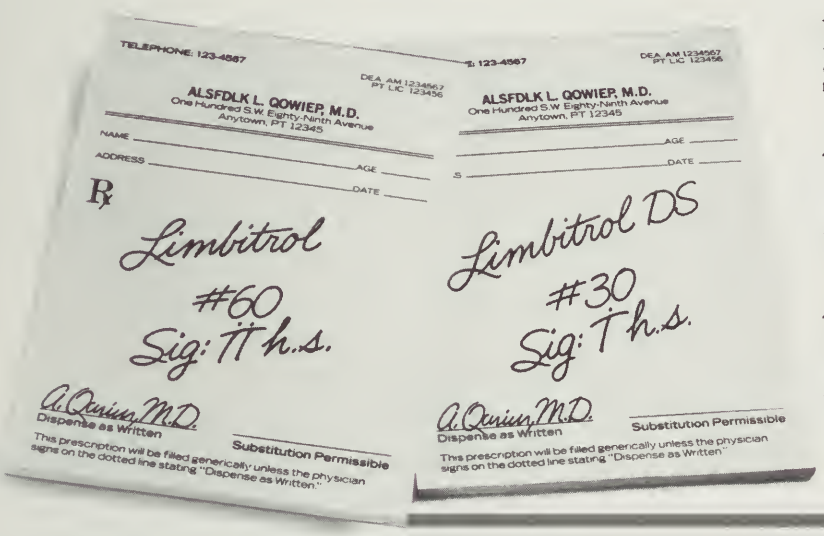
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# In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]




## Protect Your Prescribing Decision: Specify "Do not substitute."

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# Limbitrol® DS

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**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

**Limbitrol®Ⓥ**
**Tranquilizer—Antidepressant**
**Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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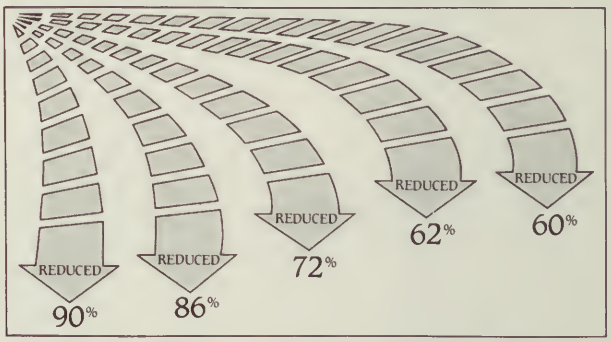
# See Improvement In The First Week[1]...

## And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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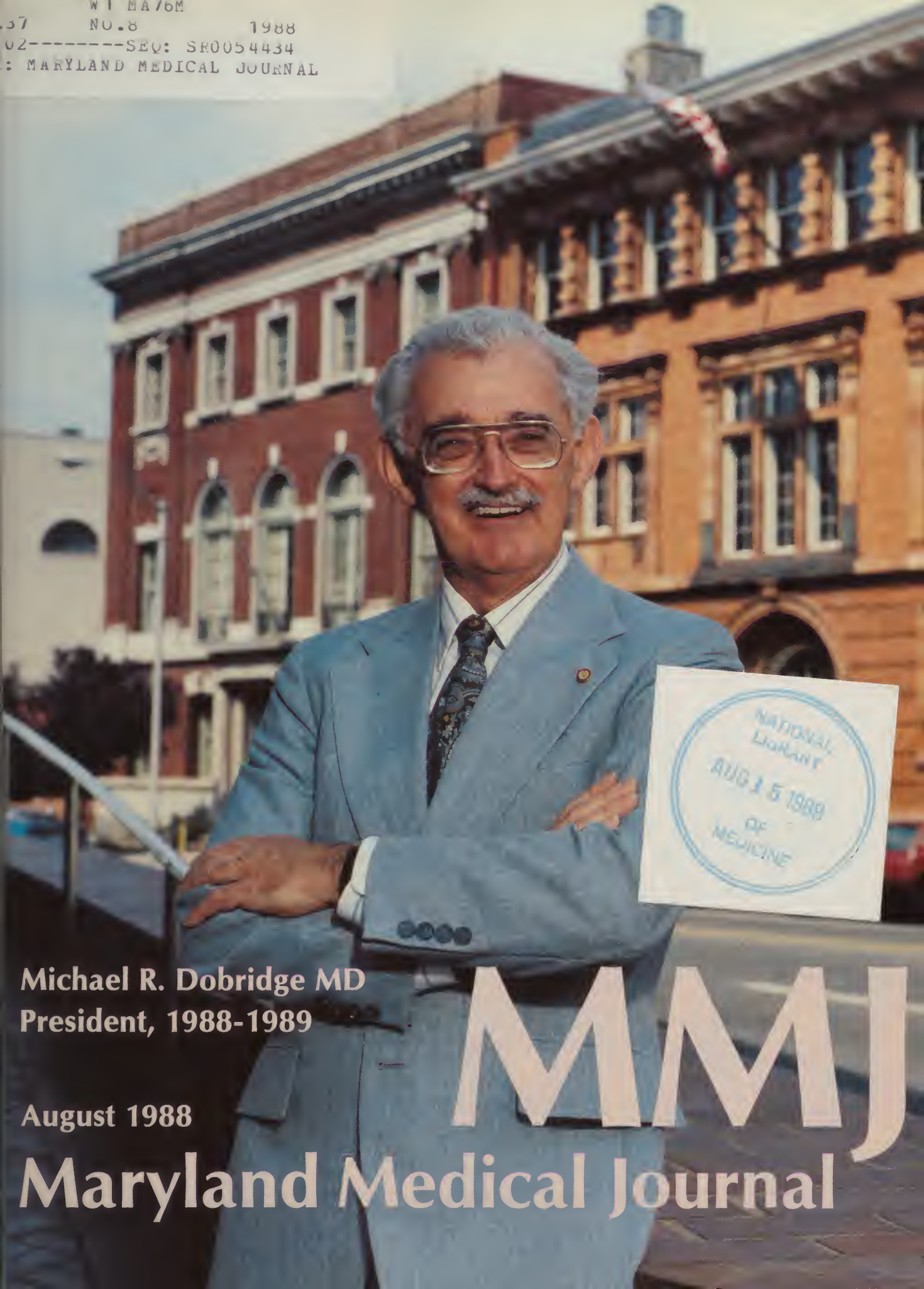
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Michael R. Dobridge MD
President, 1988-1989

August 1988

# MMJ

# Maryland Medical Journal

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Doctors have had to change their style, and often place, of practice in order to meet the complex, contradictory, and sometimes frustrating demands of the "health care marketplace." Increasingly, doctors, trained to practice medicine and not to compete in the world of business, are finding that individual practice may be impractical. Some are taking salaried positions to stabilize their income and to decrease their individual liability. Some are abandoning areas of practice which place them at risk of litigation or which prove unprofitable in the increasingly competitive market for "health care services."

And while patients are wondering what happened to the "good old doctor," doctors are wondering what happened to the "good old patient." Many patients now seem to be consumers, demanding not only individualized and humane care, but also low cost, convenience, and perfect results. Physicians find themselves caught up in a storm of expectations which they must single-handedly navigate in order to achieve and maintain quality patient

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# Physician's Checklist for Medical Office Automation

In February 1981, the Society's Executive Board accepted a recommendation from the Medical Economics committee that the Medical Society endorse Computer Business Systems, Inc. (CBSI) for referral to the membership. In doing so, the Executive Board concluded that the endorsement agreement with CBSI was worthy of the Society's imprimatur.

Now, some seven years later, the endorsement agreement program remains successfully intact and continues to monitor hundreds of computer installations in member practices. More than ever, the Society is proud of the endorsement agreement and is convinced that this program will eliminate all significant risks associated with office automation.

During this same time period, some 50 companies have entered and abandoned the medical office marketplace in the Baltimore/Washington Metropolitan area. These companies have left behind inappropriate or useless computer systems with no support available and they are all doomed to failure.

MSS
Medical Society Services, Inc.

## Medical Office Automation—Selection Criteria

If you are serious about automating your practice, the following evaluation criteria should be used to assess the strengths and weaknesses of a particular vendor. It will help you understand what each vendor has to offer relative to your specific needs. More importantly, however, it will help you determine if ongoing support will be available to you in the years ahead and at what cost:

1. Does the vendor specialize in your needs?
2. Are a large number of his sales to medical practices?
3. Is the vendor local to you?
4. Is the vendor the sole source for support?
5. Does the track record and reputation of the vendor indicate that he can do a good job for you?
6. Is the vendor successfully providing services to other practices with similar needs as yours?
7. Can the vendor provide you references in your specialty and geographical area?
8. Is the vendor willing to define your needs in his proposal/contract?
9. Did the vendor develop his own software?
10. Does the vendor make provisions for future needs of the system such as ongoing support and modifications?
11. Will the proposed system meet your present needs and can it be expanded at an add-on cost only?
12. Is the software compatible with expected or even unexpected future hardware upgrades?
13. Does the software allow for specific customization to your requirements.
14. Does the vendor cover technical obsolescence in his hardware maintenance contract?
15. Will the vendor assume full responsibility for conversion of your Accounts Receivable to the new system?
16. Will the vendor provide unlimited training at your facility?
17. Will the vendor provide you with an implementation schedule and will he commit to it?
18. Will the vendor provide a means to allow you to postpone final payment until you are sure the system works?
19. Will the vendor guarantee you a fixed maintenance fee in the years to come?
20. Will the vendor guarantee to fix or replace any failed component in one business day?
21. Will the vendor guarantee same day turnaround on maintenance calls?
22. Will the vendor provide all future software updates at no charge?
23. Will the vendor provide you access to the source code upon his failure to support you for any reason?
24. Does the system's cost/benefit provide a tangible five year breakeven point?

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August 1988

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# Maryland Medical Journal

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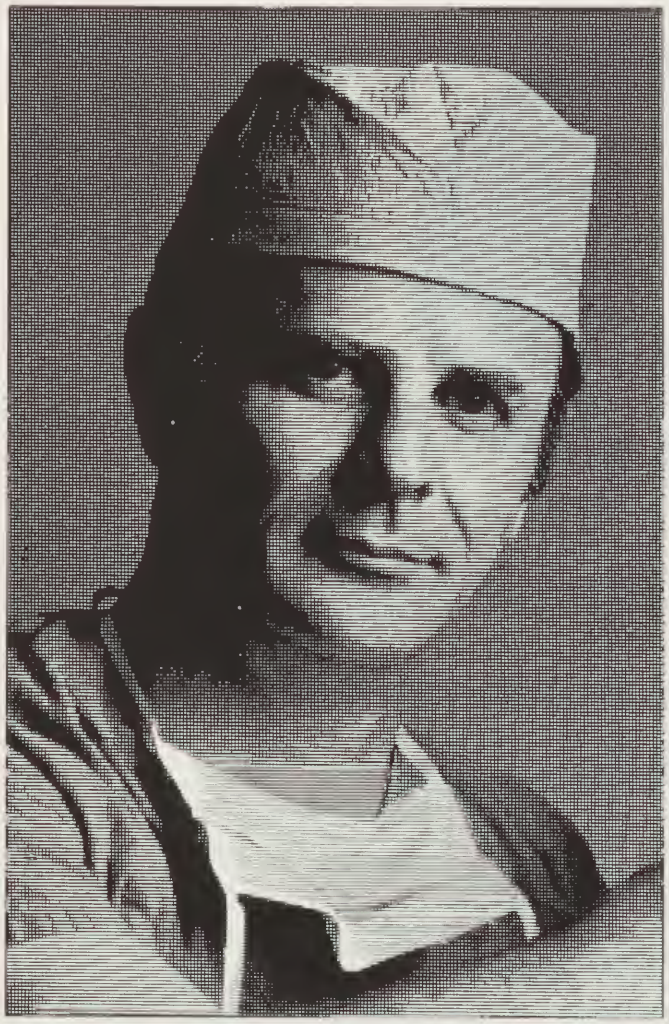
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Epidemiology and Disease Control Program

# EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER

COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

## AUGUST 1988
## SELECTED REPORTABLE COMMUNICABLE DISEASES IN MARYLAND

The number of reportable communicable diseases with onset in 1987 was summarized by county in two tables published in the Maryland Medical Journal in May 1988. For diseases of major public health importance, the figures for 1983 through 1986 were also included.

This report briefly describes the epidemiology of infectious diseases in Maryland that were reported from local health departments, hospitals, clinics, physicians, and laboratories. For many diseases additional information was obtained from active surveillance maintained by public health nurses in the local health departments and hospital infection control practitioners.

The number in parentheses after the name of each disease indicates the total number of reported cases with onset of illness in 1987. This is followed by the rates per 100,000 population in Maryland and, for comparison, the US rates. The US rates are based on the cumulative number of cases reported to the Morbidity and Mortality Weekly Report system in 1987 (obtained from: CDC. MMWR 1988; 36:840) and the estimate of the US population on July 1, 1987.

**ENCEPHALITIS, VIRAL (32) - 0.7/100,000 (USA - 0.5/100,000)**

The rate of encephalitis has been stable since 1984. The combined area of both Baltimore and Harford Counties reported 12 cases and the highest rate (1.4/100,000) in the State. The age of the patients ranged from 25 days to 89 years; the male to female ratio was 1.3 to 1. Herpes viruses were confirmed or suspected to have caused at least 11 of the 32 cases, including two individuals who developed encephalitis as a complication of chickenpox. One patient had coxsackievirus $B_5$ isolated from the cerebrospinal fluid. Seven (21.8%) patients died, three of whom had herpes encephalitis, and four had no infectious agent specified (one with leukemia and another with AIDS).

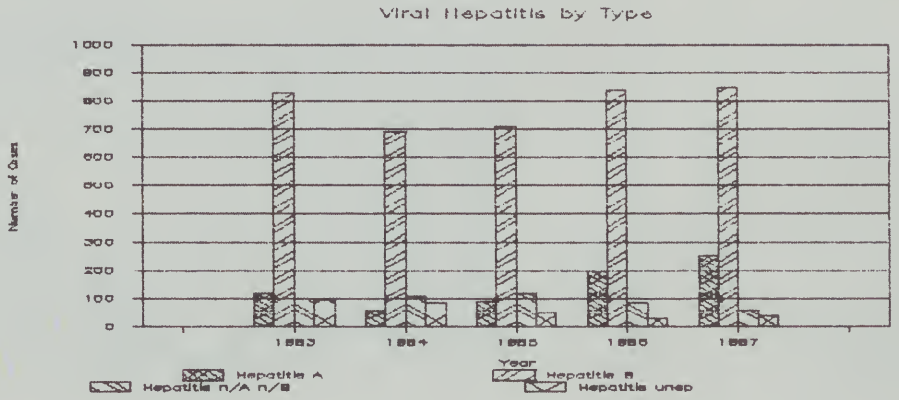
**GONORRHEA (24,132) - 536.4/100,000 (USA - 315.3/100,000)**

A decrease in gonorrhea (14.7% from 1986) was observed in 1987. At the same time, a significant increase of reported cases of penicillinase-producing Neisseria gonorrhoeae (PPNG) was noted, 276 cases, compared to 77 cases reported in 1986 and 78 in 1987.

Tetracycline-resistant gonorrhea is also becoming more prevalent. In some areas, up to 15% of N. gonorrhoeae isolates were resistant to tetracycline. Some tests have shown that more than 50% of PPNG isolates tested were also resistant to tetracycline.

## HAEMOPHILUS INFLUENZAE INVASIVE DISEASE (120) - 2.8/100,000 (USA - NA)

H. influenzae infections increased 13.8% from 1986 and caused the following illnesses: 81 (67.5%) meningitis, 30 (25.0%) bacteremia (8 with cellulitis-5 periorbital, 2 with epiglottitis, and one with otitis media and cellulitis), 3 pneumonia, 2 septic arthritis, 2 otitis media and 2 epiglottis. Most of the infections occurred in Baltimore City (4.5/100,000) and Montgomery County (3.3/100,000) in the spring and autumn. Three quarters (75.8%) of all patients were less than five years of age; 61.9% were one year old or less, including two newborns; four meningitis cases were adults. The male to female ratio was 1.2 to 1.0. Among these with known race, the white to black ratio was 1.5 to 1.0, indicating higher incidence of H. influenzae infections among blacks. Type b was the predominant serotype with the exception of one H. influenzae serotype non-b that caused bacteremia in a one day old boy. Of the 70 isolates with known results, 31 (44.3%) were resistant to ampicillin, almost three times higher than 1981 when 15.4% (6/39) were resistant. Four patients died (one with meningitis and three with bacteremia only; one of the latter also had leukemia). Of the 16 cases between 18 months and five years of age for whom vaccine status was known, 4 (25%) had received H. influenzae polysaccharide vaccine.




## HEPATITIS A (253) - 5.6/100,000 (USA - 10.1/100,000

Hepatitis A has been increasing since 1984--1987 cases were up 27.8% from 1986, 184.3% from 1985 and 321.7% from 1984. Seven small case clusters, accounting for 22 cases, were investigated in 1987. The peak incidence occurred among 20 to 29 year olds (23.3% of all cases), followed by 30 to 39 year olds (14.2%). Only five cases were diagnosed in children less than five years of age. The male to female ratio was 1.6 to 1. No seasonality was noted. Almost half (44.3%) of the patients were residing in Montgomery and Prince George's Counties, and 13.8% were from Cecil County. One hundred and seventy-one cases had an unknown or unreported source of infection. Among the 82 for whom risk information was available, 35 cases were contacts of known

or suspected cases, 11 had had international travel, and 10 were IV drug users.

**HEPATITIS B (849) - 18.9/100,000 (USA - 10.3/100,000)**

The incidence of acute hepatitis B has been stable since 1981. Some counties, though, have shown a rise in reported incidence: Dorchester with 40.3/100,000, the highest in the State, Frederick-35.8/100,000, and Worcester 32.3/100,000. Frederick County, with 48 cases, experienced a 3.4 fold rise from 1986. The male to female ratio was 1.5 to 1, and the peak incidence occurred among 25 to 30 year olds (23.2% of the cases). Of all patients, 61.7% were 20 to 34 years of age, of whom 32.1% were black males (39.2% in Baltimore City). Information on the probable source of infection was available on 316 of the reported cases: 143 (45.3%) were known (or suspected) to have self-administered illegal drugs by injection, 67 (21.2%) had had contact with a confirmed or suspected hepatitis B case, 16 (5.1%) had sexual exposure to a case or carrier of hepatitis B virus, 14 (4.4%) were employed in a medical field, 14 (4.4%) were males known (or suspected) to have homosexual relations, 13 (4.1%) had received blood or blood products (transfusion), 9 (2.8) had been attended by a dentist, 6 (1.9%) had needlesticks, 3 (0.9%) tattoos, 1 earpiercing, and 30 had other exposures.

**HEPATITIS, NON-A/NON-B (58) - 1.3/100,000 (USA - 1.2/100,000)**

Almost one quarter of all non-A/non-B cases were 60 years of age or older; 28% were between 20 and 39 years old. The male to female ratio was 1.5 to 1. Seventy percent had onset of illness in the first half of the year. During the six months prior to onset, 11 patients had received blood or blood product transfusion, one had oral surgery, two had been hospitalized, one had contact with another case, and one had other percutaneous exposure. In addition, 10 patients (17.2%) admitted self-administering illegal drugs by injection; these cases, predominantly white men in their twenties and thirties were residents mainly of Prince George's, Montgomery, Frederick and Baltimore Counties. The source of infection for 32 (55.2%) of the cases was not reported or was unknown.

**HEPATITIS, UNSPECIFIED (39) - 0.9/100,000 (USA - 1.3/100,000)**

More than half (51.3%) were 20 to 39 years old. The male to female ratio was 2.3 to 1. Forty-six percent (46.2%) were from Baltimore City and 15.4% from Cecil County.

**LEGIONELLOSIS (29) - 0.6/100,000 (USA - 0.4/100,000)**

Legionellosis was reported in persons between 27 to 81 years of age; 70.6% were between 35 and 59 including more than a quarter (27.6%) in their fifties. The male to female ratio was 1.2 to 1. Eight patients (27.6%) had onset of pneumonia in October; four of these were residents of Baltimore City and were investigated for a possible common environmental source, but such was not found. Fourteen cases were confirmed by positive gene (DNA) probe, culture of bronchial secretions, or serological tests (IFA) that showed rising titers. Six cases were reported to have underlying medical illness (chronic bronchitis, corticosteroid

therapy, renal failure, diabetes, or cancer), two of whom died. Two of the additional 23 cases without known or reported underlying illness died.

**LYME DISEASE (23) - 0.5/100,000 (USA - 0.6/100,000)**

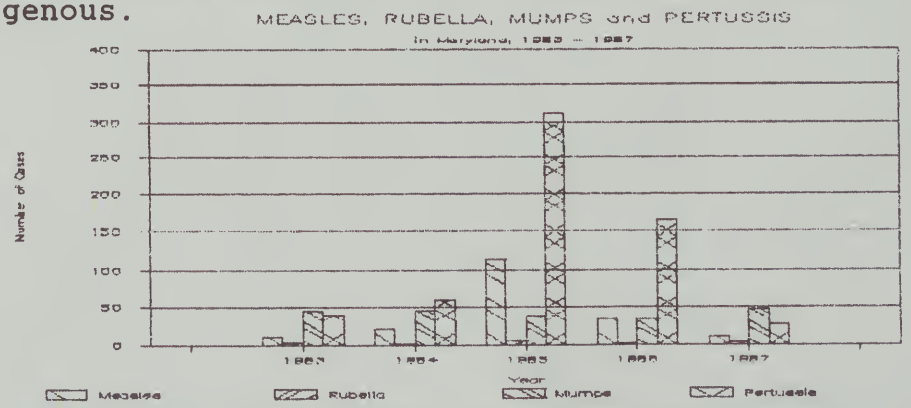
Cases were reported from Baltimore City and eight of Maryland's 23 counties. Queen Anne's County reported seven cases, the maximum for any one jurisdiction. Onset of symptoms was reported in every month of 1987 except February and April; July was the peak month with seven cases. The male to female ratio was 1 to 1.5. Age at onset of symptoms ranged from two to 80 years with seven cases reported in children less than ten years of age. Sixteen of the 23 cases reported flu-like symptoms, including fever (11 patients), myalgia (9), headache (6), sore throat (6), and, less commonly, nausea (4), stiff neck (1), and lymphadenopathy (1). The characteristic skin lesion, erythema chronicum migrans (ECM), was reported in 12 of the 22 cases; five others had some other skin manifestation, and six had no skin manifestation. Arthritis, the most commonly reported sequela, was reported in 13 cases, and knees were involved in nine. Other affected joints were shoulders, fingers, ankles, wrists, jaws, hips, and spine. Three cases were reported with neurologic manifestations; none with cardiac manifestation. Tick exposure was reported in 14 cases; 11 of these reported a tick bite. All cases were considered confirmed by clinical picture and/or positive serological results. The recommended antimicrobials (tetracycline or penicillin) were given in all cases. Three patients were hospitalized.

**MALARIA (43) - 1.0/100,000 (USA - 0.4/100,000)**

All malaria cases in Maryland were imported from Africa, India, Southeast Asia, and Afghanistan. Patients with Plasmodium falciparum (9) had exposure in Nigeria, Togo, Uganda, Sierra Leone, Ethiopia, and the Central African Republic; those with P. vivax (8) were from or had visited India, or were refugees from Southeast Asia. P. malariae (3) and P. ovale (1) were imported from Ghana and Nigeria. The additional 22 cases with unspecified Plasmodium species had visited or lived in these same regions.

**MEASLES (RUBEOLA) (10) - 0.2/100,000 (USA - 1.5/100,000)**

Measles decreased significantly from 1986 (35 cases) and 1985 (115 cases). The patients were between four and 28 years of age. Two cases were imported from Germany and England; the rest were indigenous.




TO BE CONTINUED IN THE SEPTEMBER NEWSLETTER

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# Members in the News

**William G. Armiger** MD and **Chesapeake Plastic Surgery Assoicates** have been selected for membership in the American Society for Aesthetic Plastic Surgery, Inc.

A member of the surgical teaching staff of University of Maryland Medical Institutions, Dr. Armiger also taught at The Johns Hopkins University. He is a Diplomate of the American Board of Surgery and the American Board of Plastic Surgery, and currently is vice-president of the American College of Surgeons, Maryland Chapter.

A graduate of Loyola College of Maryland and University of Maryland Medical School, Dr. Armiger served residencies at University of Maryland and St. Agnes Hospitals in Baltimore. He received postgraduate plastic surgical training at Strong Memorial Hospital in Rochester, NY. He completed a fellowship in head and neck cancer surgery and maxillofacial reconstruction at Roswell Park Memorial Institute in Buffalo, NY, one of the leading oncology centers in the nation.

• • •

**Lawrence H. Fink** MD, a Bethesda neurosurgeon, has assumed the presidency of the 1,400-member Montgomery County Medical Society. Dr. Fink is a 1965 graduate of the State University of New York, Downstate Medical Center. After completing a nerosurgical residency and fellowship at Mayo Clinic, he came to the Washington Metropolitan area in 1970 as a staff neurosurgeon at the Bethesda Naval Hospital.

Dr. Fink began his private practice in the fall of 1980. Board certified in neurosurgery and a Fellow of the American College of Surgeons, he is on the active staff of Suburban and Greater Laurel-Beltsville Hospitals. Dr. Fink is also the co-founder and president of a healthcare risk management consulting company. He has traveled extensively, studying health-care delivery systems throughout Europe, Asia, and the Middle East and is the author of numerous articles on neurosurgery and health-care delivery.

Other Montgomery County Medical Society officers are **Cheryl Winchell** MD, President-Elect; **Martin Eichler** MD, Vice-President; **Jeffrey Witte** MD, Secretary; and **Peter Sherer** MD, Treasurer.

• • •

**Robert M. Heyssel** MD, President, Johns Hopkins Health System, Baltimore, was inducted as a Fellow of the American College of Physician Executives during its thirteenth National Conference on Health Care Leadership and Management in May. Dr. Heyssel is one of a select group of physicians nationally to be recognized as having demonstrated significant contributions and superior achievements to the specialty of medical management. He has 20 years' experience in the management of health-care systems. Fellowship in the College is the highest professional honor that may be awarded to a certified "physician executive."

• • •

**George S. Malouf, Sr.**, MD recently received one of the First Annual Prince Georgian of the Year Awards in recognition of his dedication and exemplary contributions to the community.

Dr. Malouf is Chief of the Division of Ophthalmology at Prince George's Hospital and Medical Center, where he and his son, George S. Malouf, Jr., MD performed the first corneal transplant in Prince George's County.

Known to his colleagues as a peacemaker who can bring disparate sides together for a common goal, Dr. Malouf has played a major role in medicine in Prince George's County and indeed, the State of Maryland. His devotion to the cause of ecumenism and his contributions to the advancement of the eastern Christian church have accorded him outstanding recognition for community service by a physician.

• • •

**Michel Mirowski** MD, director of the coronary care unit at Sinai Hospital, was chosen by the Association for the Advancement of Medical Instrumentation to receive the prestigious Laufman-Greatbatch Prize for his pioneering work and development of the Automatic Implantable Cardioverter-Defibrillator (AICD). The prize, which includes a $10,000 endowment, cited Dr. Mirowski's unique and significant contribution to the advancement of medical instrumentation.

Dr. Mirowski, who also is Professor of Medicine at The Johns Hopkins University School of Medicine, developed the AICD at Sinai in the late 1960s. It is designed to save the lives of people who suffer from malignant disturbances of the heart rhythm. In treating more than 3,700 patients in over 250 centers worldwide, the expected death rate has dropped from about 40 percent at one year to less than 2 percent.

• • •

**E.F. Shaw Wilgis** MD, nationally known hand surgeon, has been elected to the Board of Trustees at Villa Julie College. Dr. Wilgis, who is medical director of the Raymond M. Curtis Hand Center at Union Memorial Hospital, recently was elected president of the American Society for Surgery of the Hand. He also is affiliated with the Greater Baltimore Medical Center, Children's Hospital, and The Johns Hopkins Hospital.

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## A.H. Robins Award

The A. H. Robins Award for Community Service is presented each year to a Maryland physician for outstanding service to the community. The 1988 Award was given to Albert Antlitz MD who has dedicated countless hours of his time to further the ideal of quality health-care delivery in Maryland.

Dr. Antlitz formed the Center for Health Education, the nation's first organization designed to encourage physicians to become more active in disease prevention and health promotion activities. The Center was established as a non-profit venture, and as Chairman of its Board of Directors, Dr. Antlitz was instrumental in advocating a stronger disease prevention role for physicians.

Dr. Antlitz was one of the founding fathers of the High Blood Pressure Commission for the State of Maryland and served on the Commission from 1976 until 1981. Throughout the years, the Commission has taken giant steps to ensure the proper diagnosis, treatment, and management of high blood pressure.

He also helped form the Ad Hoc Committee to establish the Health Systems Agency for Central Maryland under the Health Planning Law. He was a member of the Agency's Executive Committee and governing body from 1976 to 1981, and chaired the Systems Development Committee from 1977 to 1981.




*Albert M. Antlitz MD (right) recieving the 1988 Robins Award from Leon E. Kassel MD.*

We invite your comments as well as scientific articles. Write *Letters to the Editor* and *Commentary* *MMJ*, 1211 Cathedral St, Baltimore, MD 21201

Area meetings and course announcements are listed each month under *Doctors Take Note*

**Consultation is Back!**

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*University of Maryland Dean John M. Dennis MD (left) accepting the AMA Membership Recruitment Award recognizing student Daniel Paoli's efforts in recruiting 27 student members in the 1987 Medical Student Outreach Program.*

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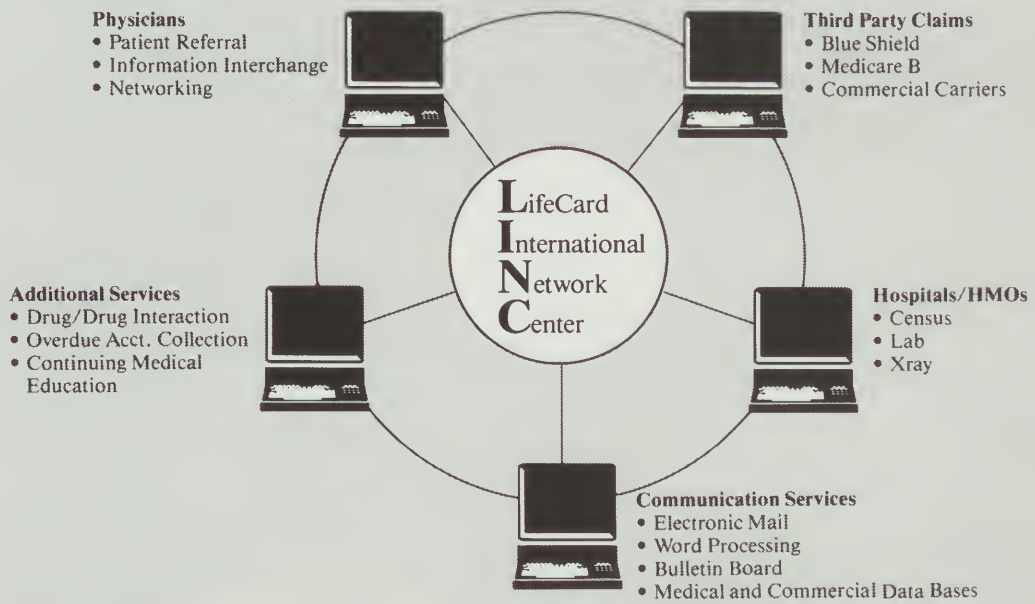
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# Executive Director's Newsletter

August 1988

**FEDERATION OF STATE MEDICAL BOARDS**

During its Annual Meeting in June, the American Medical Association adopted a resolution submitted by the Maryland Delegation regarding the annual report of disciplinary actions from the Federation of State Medical Boards. The resolution requests that the AMA work with the Federation to develop standard categories and a uniform reporting system of disciplinary actions taken by state boards against licensed physicians and to assure that organizations using the Federation's copyrighted data secure permission and agree to explain that comparisons between states on the basis of these data are invalid.

The President and Past President of the Federation of State Medical Boards highly endorsed the Maryland resolution and stated that the Federation has long objected to the misuse of its copyrighted data.

**DECRIMINALIZATION OF DRUGS**

The Maryland Delegation also introduced a resolution on the Decriminalization of Drugs during the AMA Meeting. The resolution called for a study of the health consequences that would arise from any changes in the laws regarding dangerous drugs. The Maryland Delegation introduced the resolution in an effort to help resolve the growing debate in Maryland and nationwide.

Maryland's resolution resulted in the final adoption of an AMA Board of Trustees report that details the personal and public health risks of drug abuse, and sets forth a series of recommendations for the formulation of a comprehensive national policy on drug abuse.

**RCTs**

The American Medical Association's Board of Trustees submitted Report SS during the Annual Meeting in Chicago, which proposes that the AMA support a pilot project to determine whether a registered care technologist (non-nurse, bedside care technician) would be helpful in providing bedside care to patients.

During the meeting, the report was amended to require "certification" and "registration" of the technologists rather than licensure. It is hoped this change would reduce concern about the creation of another "licensed medical provider."

The revised version of Report SS includes the following: it calls for the creation of demonstration projects; it suggests that a registered care technologists program could provide a recruitment base for nursing; and it emphasizes that the AMA initiative includes continued support for nursing in its efforts to recruit nurses for the bedside. The final report was referred back to the Board of Trustees for action.

**DIAGNOSTIC TESTING GUIDELINES**

Blue Cross and Blue Shield of Maryland, Inc., has informed Med-Chi that it is not now and has no intention of using the Diagnostic Testing Guidelines in connection with the payment of claims.

The Guidelines were developed jointly by the National Blue Cross and Blue Shield Association and the American College of Surgeons in 1987. At its meeting on September 9, 1987, the Med-Chi Council resolved to oppose the application of the guidelines by third-party payors as a basis for reimbursement. However, the Council did recognize the guidelines as a useful tool to improve medical education at the medical school and postgraduate levels.

**PHYSICIAN REHAB CONFERENCE**

On Friday, September 23, 1988, Med-Chi and The Health and Education Council, Inc. will jointly sponsor the Second Annual Convention on Professional Rehabilitation at the Marriott Hunt Valley Inn. The Conference will be open to physicians and all other practicing health professionals, and will present proved strategies for identifying, treating, and intervening with impaired professionals. For further information, contact JoAnn Cirillo at the Faculty office, 539-0872 in Baltimore or toll free in Maryland 1-800-492-1056.

**SEMIANNUAL AND ANNUAL MEETINGS**

The Semiannual Meeting scheduled for September 14-18, 1988 will be held at the Southhampton Princess Hotel in Bermuda. The keynote speaker will be James E. Davis, MD, President of the American Medical Association.

Next year's Annual Meeting will be held at the Turf Valley Hotel and Country Club in Ellicott City, Maryland from April 12-14, 1989.

Angelo J. Troisi, FACHE
Executive Director

# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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## GUIDELINES FOR PROFESSIONAL CORPORATION NAMES

The Guidelines for Professional and Corporate Names are consulted when considering the approval of a corporate name. The guidelines were adopted by the Council of the Medical and Chirurgical Faculty of the State of Maryland and appear on page 66 of the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland (November, 1984).

1. The use of the name of a hospital or other institution can only be approved if:

(a) It is clear that it is the physician members of the medical staff of that institution which have formed the professional corporation, and,

(b) Each physician member of the medical staff at the institution is given the opportunity to participate in such professional corporation.

EXAMPLES: Sinai Hospital Medical Staff Association, P.A.,
Medical Staff of Sinai Hospital Professional Association

In all cases, use of the hospital name must be approved by the hospital. In cases where the members of a particular department of a hospital wish to incorporate, the same rules will apply.

2. The use of the name of a medical school or the term "University" is prohibited. If legal under other statutes, the term "University" would be approved only for the University of Maryland Hospital as indicated above.

3. In using the name of a community, area, city, town, village, or other municipality, such names should not connote they are exclusive. Names prohibited would be similar to:

EXAMPLES: Internal Medicine Association of Salisbury, P.A.
Salisbury Internal Medical Associates, P.A.

Such names would lead the public to believe there are no other Internal Medicine specialties in that community; or would tend to lead the public to believe that this group was the only or best qualified of such specialists. The use of a street name in connection with a professional corporation is permitted, however.

4. If the corporation name includes terms common to business for promotional purposes, such terms should not be false or misleading. Any tendency to "puff" or to bring attention to the name should be avoided.

5. Wherever possible, the title of the group should indicate to the public the type of services rendered, such as psychiatry, dermatology, surgery, etc. Where this is not practical, letterheads, invoices, etc., should contain the words, "Practice limited to ...", or some other identification that can be readily understood.

6. Professional corporation names may not include the surname of any person unless it is the surname of an individual associated with the professional corporation, except as otherwise provided in these guidelines.

7. When applying for approval of professional corporation designations, applicants shall provide a document recording the signatures of each shareholder.

(References to the Committee and year in which a provision was adopted are deleted for brevity).

## OPHTHALMOLOGIST: EYEGLASS OR CONTACT LENS PRESCRIPTION

Because of complaints from patients about ophthalmologists who refuse to give the patient a copy of his prescription for eyeglasses or contact lenses, physicians are reminded that under Federal Trade Commission regulations, referred to as the Eyeglasses 11 Rule, all physicians must give patients eyeglasses or contact lens prescriptions following their examinations. The objective of the rule is to give patients the freedom to choose where they want to have the prescription filled. A reference to this federal requirement appears in The Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland. See item (3) under "Optician/Physician Relationships."

## Attention All Members

A dedication ceremony of Med-Chi's newly renovated library and Krause Reading Room will be held on Saturday, September 24, 1988 at 1 p.m. in conjunction with the Semiannual session of the Council (10 a.m.) and House of Delegates (2 p.m.).

It will be a day of special activities including a chamber music concert featuring the Peabody Institute String Quartet beginning at 1:15 p.m. A light buffet and tour of Med-Chi's library facility and building will begin at 12 noon.

Free parking will be available at the Symphony Parking Garage and parking tickets will be validated at Med-Chi's reception desk.

For those traveling from outlying areas the Faculty has made special provisions: hotel rooms at the Stouffer Harborplace Hotel overlooking Baltimore's Inner Harbor are available at the special discount rate of $99 (the normal rate is $155 per night). Reservations can be made by calling 547-1200 (tell them you are with Med-Chi). The hotel, which is part of the Galleria complex (a beautiful and unique shopping mall), offers a health and fitness club that includes an indoor swimming pool and a lovely rooftop garden.

Baltimore, a city with a history as big as its heart, has many major attractions, parks, landmarks, and cultural institutions for a variety of diversions. Come, bring your family, and join us in celebrating the distinguished history of the Med-Chi library and then participate in the activities in downtown Baltimore.

On the next page is a listing of special attractions in Baltimore during the September 23-25 weekend.

| | |
|---|---|
| National Aquarium in Baltimore | Pier 3, Pratt Street 576-3810<br>Open Saturday, 10 a.m. - 5 p.m.<br>Admission - Adults $7.75, Students and Senior Citizens $6.00, Children $4.75, Children under 3 are free |
| Baltimore Zoo | Druid Hill Park 366-LION<br>Open Daily 10 a.m. - 4:30 p.m.<br>Admission - Adults $4.00, Children and Senior Citizens $2.00 |
| U.S. Frigate Constellation | Docked in the Inner Harbor 539-1797<br>Open Daily 10 a.m. - 6 p.m.<br>Admission - Adults $2.00, Children $1.00<br>Children 5 and under are free |
| Maryland Science Center | 601 Light Street 685-5225<br>Open Saturday - 10 a.m. - 6 p.m.<br>Admission - Adults $6.50, Children and Senior Citizens $5.50 |
| World Trade Center | Pratt Street 837-4515<br>27th Floor Observation Level Panoramic View of the City and Inner Harbor also History of Baltimore Museum<br>Admission - Adults $2.00, Children and Senior Citizens $1.00 |
| Clipper City | Docked in Baltimore's Inner Harbor 539-6277<br>Reservations accepted and recommended for daily sails and also sunset and moonlight cruises<br>Admission - Adults $18.00-$32.00, Children ages 12-16 $9.00, under 12 $2.00 |
| Antique Row | 700 & 800 block of N. Howard Street and the 200 block of W. Read Street<br>Open Monday thru Saturday |
| Myerhoff Concert Hall | 1212 Cathedral Street 783-8000<br>Pops Concert; Skitch Henderson and Larry Adler - 8:15 p.m.<br>Admission - $13.00-$32.00 |
| Walters Art Gallery | 600 North Charles Street 547-ARTS<br>Open Daily 11 a.m. - 5 p.m.<br>Admission - Adults $2.00, Senior Citizens $1.00, Under 18, Students & Members are free |
| Baseball | Baltimore Orioles vs. Detroit Tigers at Memorial Stadium 243-9800<br>September 23 - 8:05 p.m.<br>September 24 - Time To Be Announced<br>33rd Street & Ellerslie Avenue<br>Admission - $4.75-$9.50 |

Pick up a copy of the Baltimore Scene at our reception desk the day of the dedication for more information on sightseeing, dining, entertainment and shopping.

# MR UPDATE

## MRI Advances the Detection of Pelvic Disorders

## PELVIC EXAMINATION

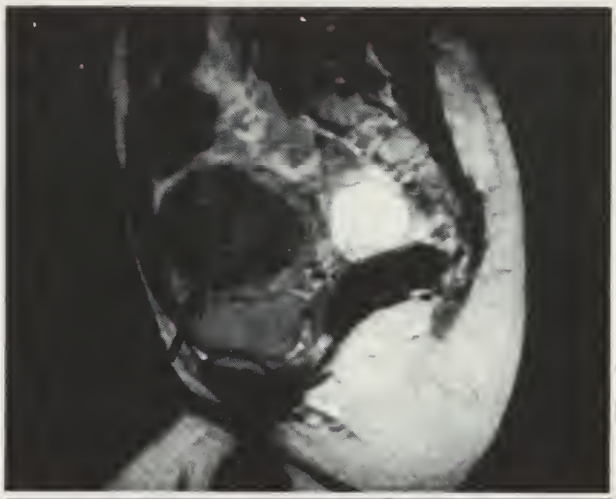
**HISTORY:** The patient is a 26 year old female with a pelvic mass. The ultrasound examination was made difficult by a large anterior fibroid. Due to shadowing from the fibroid, it was difficult to delineate the uterus and to demonstrate the separation of what appears to be two ovarian cysts posteriorly. Without clear delineation of the uterine cavity, it was difficult to be very specific about the etiology of the mass and the cysts could be considered components of a cystadenoma or a cystadenocarcinoma.

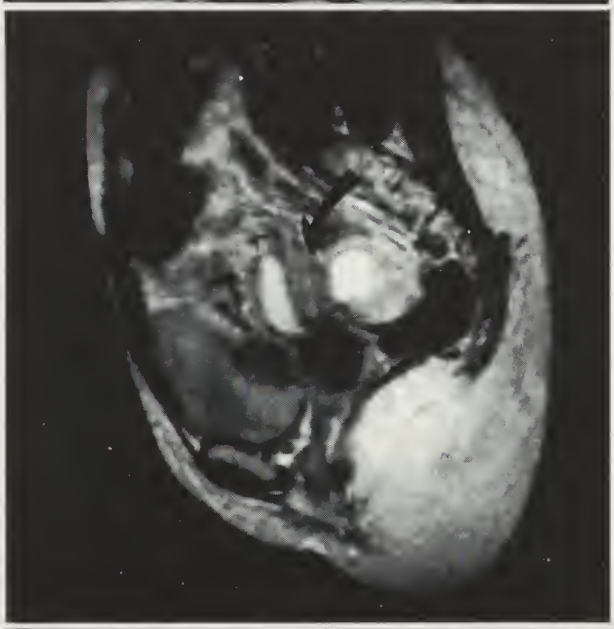
**SCAN:** Sagittal and transverse MR images beautifully demonstrate the position of the endometrium, junctional zone, and myometrium. The large anterior fibroid (straight dark arrow) is demonstrated as a distinct mass of lower intensity than the myometrium of the uterus (curved arrow). Also, posterior fluid collections appear to be clearly separated from the main mass giving additional weight to the impression of simple ovarian cysts (open arrows).

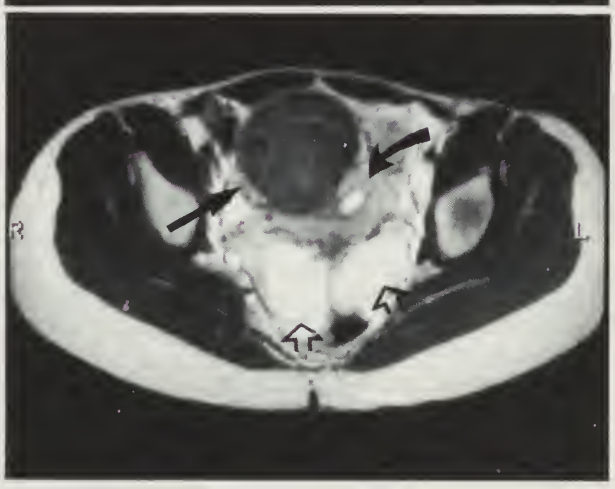
While the T1 and T2 values are not specific for fibroids or ovarian cysts, the higher tissue contrast of MRI allows clearer anatomic separation of structures. This in turn allows a more confident diagnosis of two coexisting benign processes rather than a single malignant mass.

**NOTE:** The high tissue contrast of MRI is very useful in pelvic imaging. In cases of multiple fibroids, it allows precise delineation of the position of each fibroid which can be useful in uterine sparing surgery. It is also excellent for delineating the depth of invasion in endometrial carcinoma. It is very sensitive in the detection of pelvic nodal metastases.

**MRI HIGHLIGHTS:** MRI, in general, has increased sensitivity for tissue differentiation as compared to CT. This is especially true in bone marow imaging where it has been shown to be more sensitive than radionuclide scanning for marrow replacing processes. This sensitivity is well known in the early detection of metastatic lesions and aseptic necrosis. MRI is also very useful in the depiction of subtle stress fractures or fractures in osteoporotic bones that may be difficult to demonstrate even with conventional tomography.








**MARYLAND MAGNETIC IMAGING**

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Frederick, Maryland 21701
**(301) 662-0077**

MMI operates its MRI system with all available upgrades including contiguous slices as thin as 2.5 mm; quadrature detection head, body and extremity coils; large field of view spine coil; dedicated cervical coil; partial flip imaging; single breath-hold body imaging; and cardiac and respiratory gating.

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# Highlights: Executive Committee and Council Actions

**Executive Committee - April 14, 1988**

- **Minutes** The Executive Committee approved the minutes of March 10, 1988 as distributed.
- **Committee on Alcoholism and Chemical Dependency** The Executive Committee approved two resolutions submitted by the Committee on Alcoholism and Chemical Dependency:
  (1) The Voluntary Banning of Tobacco Use on School Property
  (2) The Removal of Tobacco Products from Pharmacies:
- The resolutions will be submitted to Council with the Executive Committee's recommendation for approval and submission to the House of Delegates for its consideration.
- **Public Relations Committee** On behalf of the Public Relations Committee, Dr. James Bell, Chairman, reported on the current status of the Media Awards Program, noting that such a program could generate a great deal of positive media coverage for the Faculty. He stated that the committee desired to present the awards during the annual meeting of the House of Delegates as opposed to the semiannual meeting, and that the awards had been reduced to three first-place prizes.

  The Executive Committee approved the committee's request that the media awards be presented during the annual meeting of the House of Delegates, beginning with the 1989 annual meeting. This matter will be forwarded to Council for final approval.

  The Public Relations Committee also requested the formation of an ad hoc committee to evaluate and possibly redesign the Faculty's Communications Department to combine marketing, public relations and communications into a single division, also, that a full-time staff member and/or a public relations consultant should be hired to guide the Public Relations Committee in its efforts to take a proactive stand in today's constantly changing medical environment.

  Executive Director Angelo Troisi advised the Executive Committee that a study of the reorganization of the Faculty's Communications Department is being considered at this time. After a lengthy discussion, the Executive Committee approved the formation of an ad hoc committee to work with the staff in determining the future structure of the Faculty's Communication Department.
- **Peer Review Committee** The Executive Committee considered, but did not approve, the Peer Review Committee's recommended resolution concerning the selection of members to serve on the new Physicians Quality Assurance Board. A system of selection encompassing the committee's recommendations is being worked on by staff and will be presented to the Council for approval.
- **Physician Rehabilitation Committee** A letter from the Physician Rehabilitation Committee was remanded to Executive Session for consideration.
- **Continuing Education Committee** The Executive Committee voted to discontinue the $75 remuneration for members of the Continuing Medical Education Review Committee in the performance of an on-site CME accreditation evaluation. In its deliberations, the Executive Committee considered
  (1) that the CMER Committee is the only committee in which payment for services is provided its members
  (2) Med-Chi has other established committees that generate income for the Faculty but its members do not receive remuneration for their services.

This issue will be forwarded to Council for consideration.

- **Advertising Policy - *MMJ*** The Executive Committee approved the following motion for submission to the Council:
  The Medical and Chirurgical Faculty of the State of Maryland and the publishers of the Maryland Medical Journal reserve the right to reject advertising that is in conflict with the ethical opinions or policies of the Faculty.
- **Young Physicians Committee** The Executive Committee approved the recommendation of the Young Physicians Committee that Med-Chi authorize funding for a young physician delegate to attend the AMA's Young Physicians Section meeting in Chicago in June 1988, with the proviso that this issue be reviewed on an annual basis.
- **Committee on AIDS** AIDS and Insurance - The Executive Committee did not approve a letter from the Committee on AIDS requesting a letter be sent to Governor Schaefer asking for his assistance in obtaining a response from the State Insurance Commissioner's office concerning HIV testing of applicants for insurance. It was the Committee's decision that such communications and information could be achieved through the Med-Chi staff.
- AIDS Conferences - The Executive Committee reviewed correspondence from the Committee on AIDS and Dr. Lee-Llacer's response concerning Dr. Donald Pachuta's request to attend the Executive Committee to discuss cosponsorship of two conferences on AIDS planned for November 1988. The Executive Committee determined that until the AIDS Committee could provide its recommendations on this issue, a decision could not be made. The matter was referred back to the AIDS Committee with a request for its recommendations.
- **Blue Cross/Blue Shield DMS III Diagnoses** The Executive Committee received, for information, a letter sent to Blue Cross/Blue Shield of Maryland requesting clarification of whether BC/BS is reimbursing social workers who submit claims using DMS III codes to describe their services.
- **AMA Reorganization** The Executive Committee was advised that staff is studying the recent AMA reorganization to determine whether it would be applicable to reorganization of Med-Chi in order to align staff functional areas with AMA staff functional areas.
- **Center for Health Education (CHE)** An agreement

that will incorporate the functions and staff of the Center for Health Education into Med-Chi with the CHE maintaining its 501(c) (3) tax exempt status was discussed.

- **Specialty Identification Ad Hoc Committee** It was reported that the Specialty Identification Committee is actively reviewing applications received from the Board of Medical Examiners. Recommendations to the Board will be based on criteria set forth in administrative regulations and not in an arbitrary or capricious manner. This report was received for information only.
- **Malpractice Survey** The Executive Committee received for information the preliminary results of the high-risk malpractice survey that included the following specialties: obstetrics, emergency medicine, neurosurgery, and orthopedics.
- **Medicare** Mr. Troisi reported that letters have been directed to both Medicare carriers for Maryland (Blue Cross/Blue Shield of Maryland and the Pennsylvania Blue Shield) questioning the denial of unassigned claims based on the carrier's perception that the medical care rendered was not medically necessary.
- **Role Relationship Committee** The Committee was informed that the members of the Ad Hoc Committee to Study Role Relationships were being asked if they would continue to serve on the committee to study the issues referred back to the committee.
- **Nurses** Mr. Troisi announced that he and Norbert Picha had recently met with members of the Maryland Nurses Association and the Maryland League for Nursing for discussion of the nursing shortage and in what ways Med-Chi could assist them. Mr. Troisi stated that nurses are trying to determine if the establishment of a cost accounting system for nursing services would be a viable option toward nurse retention in the inpatient environment.
- **Council Attendance** The Executive Committee was provided with a copy of memorandum sent to the component medical societies advising each component of the importance of their Council representatives, regular attendance at Council meetings.
- **Long Term-Care and Geriatrics** The Executive Committee reviewed and discussed the letter from the Committee on Long Term Care and Geriatrics requesting Med-Chi's support of statewide continuing medical education in Geriatric Medicine and Dr. Lee-Llacer's response. After considerable discussion, the Executive Committee decided to table the issue until further information is received from the Long-Term Care Committee and suggestions from the staff are submitted for consideration.
- **Executive Session** Mr. Troisi reported on a meeting with Dr. Joseph Chambers and Dr. Edward Kitlowski during which the Physician Rehabilitation Committee requested consideration of establishment of a full-time, salaried position for a medical director. Further discussions included the requirement for the accumulation of sufficient workload data and an evaluation of such data before this request could be considered. Such data includes information pertaining to the number of "successes" (those who have returned to the active practice of medicine), the number of dropouts in the program, and other information that would be helpful to the Executive Committee in properly addressing this matter.

**Council - April 27, 1988**

- **Minutes** The minutes of the Council and Executive Committee were acted upon as follows:
  Minutes approved: Council Saturday, March 26, 1988
  Minutes accepted: Executive Committee March 10, 1988
- **Resolutions Approved** The Council unanimously approved the following resolutions to be submitted to the House of Delegates for consideration
  Resolution 1/88 - Voluntary Banning of Tobacco Use on School Property
  Resolution 2A/88 - Removal of Tobacco Products from Pharmacies
- **Public Relations Committee** Upon recommendation of the Executive Committee, the Council approved the request of the Public Relations Committee that media awards be presented during the Faculty's annual meeting, beginning with the 1989 annual meeting.
- **Advertising Policy** The Council, on recommendation of the Executive Committee, approved unanimously the following advertising policy for the *Maryland Medical Journal*:

  > The Medical and Chirurgical Faculty of the State of Maryland and the publishers of the Maryland Medical Journal reserve the right to reject advertising that is in conflict with the ethical opinions or policies of the Faculty.

- **Committee on Young Physicians** The Council approved the request of the Committee on Young Physicians to provide funds for the attendance of a young physician delegate to the AMA's Young Physicians Section. It was reported that the AMA had provided these funds in the past but had discontinued this financial support.
- **Medical Mutual Election** Dr. Dobridge announced that the following nominees had been elected to the Board of Med-Mutual:
  Thomas J. Rohe, III, CPA
  Gerald J. Carroll MD
  Edward J. DellaVecchia
  Angelo J. Troisi
  Raymond M. Yow MD
- **Physicians Reliance** Mr. Troisi reported that he had learned from Dr. Manning Alden that the Physicians Reliance Group would begin selling insurance in Maryland by the end of May. Also, according to Dr. Alden, the Physicians Reliance Group needed only to submit the proper documents to the State In-

surance Commissioner in order to be licensed to sell insurance in Maryland.

- **Pro Update** Maryland Foundation for Health Care - Michael Murray reported that $5,123 has been deposited into the repayment fund to amortize the Foundation start-up costs of some $87,000 advanced by the Faculty. Med-Chi continues to provide management support, and considerable effort has been made to strengthen the Foundation's data-processing capabilities. The Foundation currently is profitable and continues to successfully administer the admission review contract with Blue Cross/Blue Shield of Maryland. Several new contracts have been obtained for utilization review in the nursing home setting. Also, liaison continues to be maintained with the Prince George's Foundation for Health Care.
- **Professional Review Organization** - The Faculty's PRO Monitoring Committee continues to receive physicians responses to the survey questionnaire published in the March *Maryland Medical Journal* regarding actions of the Delmarva Foundation for Health Care. A compilation of the survey will be reported to Council at a future meeting.
- **Medicare - Denial of Claims by Carrier** Dr. Lee-Llacer reported to Council that letters had been sent to both Medicare carriers (Blue Cross/Blue Shield of Maryland and Pennsylvania Blue Shield) questioning the denial of unassigned claims based on the carrier's perception that the medical care rendered was not medically necessary.
- **Committee on Continuing Medical Education Review** The Chairman reported that, in the past, the CMER Committee members have received remuneration for conduction site surveys, but no other committees of the Faculty, including those which generate income, receive payment for serving on committees. The Council, upon recommendation of the Executive Committee, voted to discontinue payment to committee members for services provided while serving on Faculty committees.
- **Emeritus Membership** The Council approved Emeritus Membership for the following physician at the request of the component society indicated: Baltimore City Richard Fravel MD, Baltimore City This matter will be presented to the House of Delegates for approval at its meeting on April 27.

### Council - April 29, 1988

The 370th meeting of the Council was held immediately following the House of Delegates Meeting, Baltimore Convention Center. The President, Michael R. Dobridge MD, called the meeting to order.

- **Introduction of New Members** The President called the names of the new members:
  Susan Guarnieri MD, Baltimore City
  Thomas E. Allen MD, Baltimore County
  Robert H. Wright MD, Caroline County
  Henry P. Laughlin MD, Frederick County
  J. Richard Lilly MD, Montgomery County

Those present were welcomed with applause by the councilors.

- **Election of Chairman and Vice-Chairman** The following councilors were re-elected unanimously to their respective positions:
  Reynaldo L. Lee-Llacer MD, Chairman
  J. David Nagel MD, Vice-Chairman
- **Physician Quality Assurance Board Nominees** A list of nominees for the new Physicians Quality Assurance Board was distributed to the Council for review. Many suggestions were made regarding the best method in which to select the members of the Board for submission to the Governor for appointment. Following a lengthy discussion, the Council adopted the following motion:

  That the Executive Committee be charged with reviewing the current list of names and to submit not less than 15 nor more than 20 to the Council for review, and if the Council had significant difficulties, then a special meeting of the Council would be called to make final determination for submission to the Governor's office.

### Executive Committee - May 4, 1988

- **Physician Quality Assurance Board** The Committee reviewed and approved the following as the intent of the Council's motion:

  It was moved that the Executive Committee be charged with reviewing the current list of names and to submit not less than 15 nor more than 20 names of the Council for review, and if the Council had significant difficulties, then a special meeting of the Council would be called to make a final determination for submission to the Governor's office.
- **Review of Legislation SB 508** - Physician Quality Assurance Board–The Committee reviewed the entire SB 508 with emphasis on the following:

  Page 4 - lines 25-36, Composition
  Page 6 - lines 11-32, Appointments, meetings, compensation, travel
  Page 7 - line 26 - Annual report to the Faculty
  Page 13 - lines 30-33, "Shall perform any necessary preliminary investigation before referring..."
  Page 14- lines 22-31, Standards of medical care (use of component societies)
  Page 14- line 33, All complaints except Physician Rehabilitation Committee
  Page 15- lines 20-36, Contracting
  Page 20- lines 1-2, Clear and convincing
- **Selection of List of Nominees: Physician Quality Assurance Board** The Executive Committee reviewed the CVs of all physicians, and after great deliberation, unanimously supported the following 18 nominees: Staff was directed to notify individuals so named to ensure their willingness to serve if selected:

  1. Rose M. Bonsack MD, Harford County, General Practice
  2. Peter E. Dans MD, Baltimore City, Infectious Disease
  3. Christopher M. Harvey MD, Baltimore County, Radiology/Diagnostic
  4. Claude D. Hill MD, Baltimore City, Obstetrics/Gynecology
  5. C. Earl Hill MD, Anne Arundel County, Family Practice

6. Victor R. Hrehorovich MD, Baltimore City, Internal Medicine, Pulmonary Disease, and Infectious Disease
7. Lawrence A. Jones MD, Washington County, Urology
8. David P. Largey MD, Wicomico County, General Surgery
9. Renaldo Lee-Llacer MD, Prince George's County, General Surgery and Thoracic Surgery
10. John T. Lynn MD, Prince George's County, Orthopedic Surgery
11 Francis C. Mayle, Jr., MD, Montgomery County, Neurology
13. Gary L. Rosenberg, Montgomery County, Allergy/Immunology
14 John F. Strahan MD, Baltimore County, Dermatology
15. John B. Umhau MD, Montgomery County, Family Practice
16. Karl H. Weaver MD, Baltimore City, Pediatrics
17. Israel H. Weiner MD, Baltimore City, Neurological Surgery
18. Thomas M. Wilson MD, Montgomery County, Obstetrics & Gynecology

Staff was also directed to send each Counselor a copy of the list, with a request to report by May 11th if significant difficulties were experienced, and, if none, it would be assumed that such action would be viewed as an affirmation of the Executive Committee's deliberation.

**Executive Committee - May 12, 1988**

- **Minutes Approved** The Executive Committee approved the minutes of April 14, 1988 as distributed.
- **New Meeting Day** The Executive Committee agreed to schedule meetings on the third Thursday of each month, rather than the second Thursday. Staff was asked to notify all Committee members of the exact date of the next meeting.
- **Welcome to Dr. Harold Bob** Dr. Lee-Llacer congratulated Dr. Harold Bob on his new position as Secretary of the Executive Committee.
- **Physicians Quality Assurance Board** A review of comments from Council members on nominees selected by the Executive Committee was referred to the executive session for consideration.
- **Liaison Committee With Third Party Carriers** The Executive Committee reviewed a report and recommendation from the Liaison Committee with Third-Party Carriers regarding the financial losses sustained in 1987 by Blue Cross and Blue Shield of Maryland, as reported to the Faculty by Arthur T. Keefe MD, BC/BS Vice President and Corporate Medical Director.
  The Executive Committee deferred action on the Committee's recommendations pending receipt of additional information from Blue Cross and Blue Shield of Maryland.
  Dr. Nagel moved that the Chairman of the Liaison Committee with Third-Party Payors, at least one member from Council designated by the Council Chairman, and appropriate staff meet with representatives from Blue Cross and Blue Shield for discussion of this issue and report back to the Executive Committee. The motion was seconded and, following discussion, adopted.
- **AMA Hospital Medical Staff Section** Victor Hrehorovich MD reported that he was asked by the AMA Hospital Medical Staff Section to speak on Quality Assurance Efforts in Maryland during the AMA Hospital Medical Staff Section meeting. The Executive Committee authorized Dr. Hrehorovich to speak to the AMA-HMSS on Quality Assurance Efforts in Maryland as a representative of Med-Chi. However, when doing so, he will clarify that the Quality Assurance proposal presented is the initial groundwork for a more formalized system to be developed under the auspices of the Faculty.
- **After Action on Medical Mutual Proxies** The Executive Committee discussed the events of the 1987-88 Med-Mutual proxy campaign, and noted the lessons learned and recommendations to be considered in the pursuit of future Med-Mutual proxy campaigns. Committee members voted to place Med-Mutual proxies on the calendar as a specific item to be presented to the Executive Committee at least three months prior to April 1989.
- **"Senioreach" Medicare Payment Initiative** Dr. Leonard Lichtenfeld, Co-Chairman of the Legislative Committee, reported on the Committee action of May 11 and requested Executive Committee approval of the "Senioreach" concept for presentation to Council at its next meeting on May 21, 1988. During the meeting on May 11, the Legislative Committee formulated ideas for a possible "Senioreach" program, and outlined three proposals: A voluntary program that would simply be an agreement between doctor and patient; a "courtesy card" program in which Med-Chi would determine income limits, and if a patient fell within those limits, he or she would be provided with an accepting physician; and a program in which Med-Chi would provide the names of physicians who accept assignment to any patient upon request.
  Members of the Executive Committee voiced their favor of the third program option and noted that if approved by Council, the "Senioreach" program should be activated immediately.
  Dr. Atkins moved to accept the "Senioreach" proposal of the Legislative Committee in principle and asked that it be refined and detailed by an ad hoc committee and submitted to Council at its next meeting on May 21, 1988. The motion was seconded and adopted.
- **Committee on Alcoholism and Chemical Dependency** The Executive Committee reviewed a request from the Committee on Alcoholism and Chemical Dependency for the AMA Delegation to initiate action in resolution form regarding Spuds McKenzie advertising for presentation to the AMA. The resolution would request that the AMA review all Spuds McKenzie advertising and products and con-

clude that Anheuser-Busch Spuds McKenzie promotions are unethical because they encourage young children to use alcohol.

The Executive Committee did not approve the request, stating that the issue did not warrant any action at this time, and voted to refer the matter to Council for final decision.

- **HB-619** The Executive Committee received, for information, a memo to the Presidents of Component Societies and statewide specialty societies requesting that each organization draft a letter to Governor Schaefer requesting his veto of HB-619, "Optometry - Use of Topical Ocular Diagnostic Pharmaceutical Agents." The Committee also reviewed all correspondence addressed to the Governor from Societies that complied with the request.
- **Blue Shield of Pennsylvania** The Executive Committee reviewed a response letter from Blue Shield of Pennsylvania regarding the denial of services rendered because of the determination of "not medically necessary." The letter was forwarded to the Liaison Committee with Third-Party Carriers for further study.
- **HB-1285** The Executive Committee reviewed a letter from Med-Chi to Governor Schaefer requesting his veto of HB-1285, "Health Claims Arbitration Certification of Expert Party." The letter relayed recent findings that HB-1285 would deny a physician his constitutional right to defend himself in a malpractice case.
- **Grant for Medicare Beneficiaries** The Center for Health Education, in conjunction with the Johns Hospital University Department of Health Policy Management, has received a four-year grant from the Health Care Administration on Preventive Health Services for Medicare Beneficiaries. The CHE will be responsible for the education component of this grant and will cooperate with Med-Chi in its implementation.
- **Ad Hoc Liaison Committee to Med-Mutual** Dr. Atkins reported on a meeting of the Ad Hoc Liaison Committee to Med-Mutual held on May 11, 1988, stating that members of the four major risk groups were invited to attend the meeting, and only representatives from the OB/GYN Society and Med-Mutual attended. Mr. Troisi, who also attended the meeting, noted that an excellent discussion was initiated between both groups and that the meeting was strictly informational.

### Council - May 21, 1988

- **Committee On Hospital Medical Staffs** Upon recommendation of the Executive Committee, Council unanimously approved the request of the Hospital Medical Staff Committee to submit a resolution to the AMA Hospital Medical Staff Section calling on the Joint Commission on Accreditation of Health Care Organizations to examine implementation of medical staff self-governance principles.

Council also approved the AMA's request that Dr. Hrehorovich speak during the AMA Annual Meeting on the preliminary committee work efforts toward development of a quality assurance program in Maryland.

- **Emeritus Membership** Council approved the request of the Frederick County Medical Society that Emeritus Membership be granted to Richard L. Fruth MD of Frederick. This matter will be presented to the House of Delegates on September 24 for consideration.
- **Spuds McKenzie Advertising** The recommendation of the Committee on Alcoholism and Chemical Dependency that the AMA Delegation initiate action in the form of a resolution indicating that the Spuds McKenzie promotions are unethical was considered. After a lengthy discussion, the Council voted to take no further action in this matter.
- **"Senioreach"** Dr. Israel Weiner, Chairman of the Legislative Committee, reported on the "Senioreach" program, a referral system that would assist senior citizens of Maryland in obtaining physicians who accept Medicare Assignment as payment in full. It was moved, seconded, and approved to initiate the "Senioreach" program in principle. Med-Chi will develop this concept in close coordination with the component medical societies.
- **Federation of State Medical Boards** A resolution regarding the annual report of disciplinary actions published by the Federation of State Medical Boards was adopted by the Council as follows:

  Resolved, That the American Medical Association work with the Federation of State Medical Boards to develop standard categories and a uniform reporting system to be used by the state boards, and be it further

  Resolved, That the American Medical Association work in cooperation with the Federation to assure that the organizations that use the Federation's copyrighted data secure permission and that such permission will only be given where the data is accompanied by an explanation indicating that any comparison between states based on this data is invalid, distorts the record, and is a disservice to the work of the State boards.

- **Solicitation of Comments by Governor's Office** Governor Schaefer's office requested comments from Med-Chi indicating problems and concerns about health care in Maryland and any possible solutions or recommendations to help resolve the issues, Council members were solicited to turn in their comments by the end of the meeting. Council decided that the President and the Executive Director will review the comments and submit them to the Governor's office for inclusion in the Governor's Briefing Book.
- **House Bill 619 - Optometry** An overview of the governor's veto of House Bill 619 was presented by Dr. Gordon Heiner, President, Maryland Society of Eye Physicians and Surgeons. Dr. Heiner thanked the following organizations for the unity of

the profession that was demonstrated by their submission of a request for veto to the Governor:

Anne Arundel County Medical Society
Baltimore City Medical Society
Baltimore County Medical Association
Calvert County Medical Society
Caroline County Medical Society
Cecil County Medical Society
Charles County Medical Society
Frederick County Medical Society
Howard County Medical Society
Kent County Medical Society
Montgomery County Medical Society
Prince George's County Medical Society
Somerset County Medical Society
St. Mary's County Medical Society
Wicomico County Medical Society
The Asthma and Allergy Society
Maryland Radiological Society, Inc.
Maryland Neurosurgical Society
Maryland Urological Society
The Orthopaedic Center, P.A./Orthopaedic Surgery and Sports Medicine for Children and Adults
Maryland Chapter of the American Academy of Pediatrics

- **Med Mutual Proxies** A summary of Med-Chi's efforts in obtaining proxies for the 1988 Med-Mutual election was presented to the Council for information. The lessons learned from this first experience in gathering proxies were:

  1. Most importantly, before Med-Chi launches a proxy campaign specific objectives should be determined; e.g., if the campaign's intent is to select members of the Med-Mutual Board, nominees should be determined early, full support for those nominees should be established, and one proxy agent selected to represent Med-Chi.
  2. In mailing the proxies, two labels for each physician should be used; one placed on the outgoing envelope and the other placed beneath the signature block on the proxy form.
  3. Mailing labels should be obtained from Med-Mutual so that proxy mailings are made to Med-Mutual members only.
  4. Proxy mailings should not be made prematurely; i.e., it would be better to mail out Med-Chi proxies after Med-Mutual had mailed its proxies.
- **Maryland Women in Medicine** Council was informed that the Med-Chi exhibit on Maryland Women in Medicine was on display in the lobby of Osler Hall in celebration of May as "Women in Medicine Month."
- **Council Meeting** Council was reminded of the next meeting of the Council scheduled for Saturday, September 24, 1988 at 10 a.m. in the Faculty Building, followed by dedication ceremonies in celebration of the newly renovated Krause Reading Room of the Faulty Library, and the meeting of the House of Delegates at 2 p.m.
- **Physician Quality Assurance Board** Council reviewed nominees for the Physicians Quality Assurance Board. After a great deal of discussion and debate, the following list of 18 names were approved for submission to the Governor for his appointment to the Board. It was accepted that the names would be in alphabetical form and geographic location, as well as the specialty of the physician would be presented. Updated curricula vitae also would be included with the submission of the following list of nominees:

  1. Rose M. Bonsack MD, Harford County, General Practice
  2. Peter E. Dans MD, Baltimore City, Infectious Disease
  3. Christopher M. Harvey MD, Baltimore County, Radiology/Diagnostic
  4. Claude D. Hill MD, Baltimore City, Obstetrics/Gynecology
  5. C. Earl Hill MD, Anne Arundel County, Family Practice
  6. Victor R. Hrehorovich MD, Baltimore City, Internal Medicine, Pulmonary Disease, and Infectious Disease
  7. Lawrence A. Jones MD, Washington County, Urology
  8. David P. Largey MD, Wicomico County, General Surgery
  9. Reynaldo Lee-Llacer MD, Prince George's County, General Surgery and Thoracic Surgery
  10. John T. Lynn MD, Prince George's County, Orthopedic Surgery
  11. Francis C. Mayle, Jr., MD, Montgomery County, Neurology
  12. Gary L. Rosenberg MD, Baltimore City, Allergy/Immunology
  13. John F. Strahan MD, Baltimore County, Dermatology
  14. J. Andrew Sumner MD, Baltimore City, Emergency Medicine
  15. John B. Umhau MD, Montgomery County, Family Practice
  16. Karl H. Weaver MD, Baltimore City, Pediatrics
  17. Israel H. Weiner MD, Baltimore City, Neurological Surgery
  18. Thomas M. Wilson MD, Montgomery County, Obstetrics/Gynecology

# New this year . . .

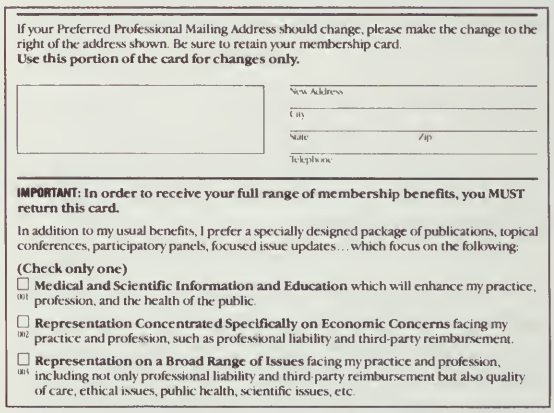
# One more reason to join the AMA

## Special benefit packages available with 1988 membership



A diverse membership has diverse needs, and the AMA is committed to addressing those needs. This year we're introducing something new when you join the AMA or renew your membership. In your AMA Membership Kit you'll have the opportunity to sign up for one of three *benefit packages* of publications, conferences, participatory panels, focused issue updates, etc., on topics related to the area you designate. Each package is tailored to address your particular interests:

- *Medical and scientific information and education* designed to enhance your practice, profession, and the public health.
- *Representation concentrated specifically on economic concerns,* such as professional liability and third party reimbursement.
- *Representation on a broad range of issues,* including not only economic concerns, but also quality of care, ethical issues, public health, and scientific issues.



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**Use this portion of the card for changes only.**

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City
State Zip
Telephone

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**(Check only one)**

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☐ 002 **Representation Concentrated Specifically on Economic Concerns** facing my practice and profession, such as professional liability and third-party reimbursement.

☐ 003 **Representation on a Broad Range of Issues** facing my practice and profession, including not only professional liability and third-party reimbursement but also quality of care, ethical issues, public health, scientific issues, etc.

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Please look for the card in your AMA Membership Kit and return it promptly. Your new benefit package is one more way the AMA supports you as a physician.

James H. Sammons, MD
Executive Vice President

**American Medical Association**
535 North Dearborn Street
Chicago, Illinois 60610

# The 1988-89 Leader for Maryland Medicine: Michael R. Dobridge MD

CHARLOTTE A. KARIN

Dr. Dobridge brings a strong commitment to continuing the development of a well-structured, forceful organization to be the voice of Maryland physicians. A person who enjoys being in organizations, he feels it is much better to be on the inside rather than the outside when trying to accomplish something. He believes, "So many factors control and influence medicine and the delivery of medical care that if physicians are not involved, they are going to lose out. That's the way it is in the real world." He is dedicated and deliberate in his role as president of the Medical and Chirurgical Faculty.

### Origins and Activities

Michael Dobridge was born in the small town of Guttenberg, New Jersey, and he considers himself fortunate to have received a good, solid background for college and medical school from Wehawken High School. Graduating from Franklin and Marshall College in 1947, he went to Jefferson Medical College in Philadelphia where he received his MD in 1951. The internship and Chief Residency at Reading and St. Joseph's Hospitals, respectively, in Pennsylvania completed his training for a career in Family Practice. From 1953 to 1955 he served as a Regimental Surgeon in the United States Army, and he began his private practice in Maryland in 1955. Some of his earlier hospital affiliations were Washington Sanatorium, Suburban Hospital, and Holy Cross Hospital. Having been certified in Family Practice in 1972, Dr. Dobridge has a broad professional background.

In 1956 he joined the Montgomery County Medical Society (MCMS) and the Medical and Chirurgical Faculty of Maryland (Med-Chi). His involvement in the MCMS includes Chairman of the Professional Relations Committee for two years and the President in 1972. In the mid-1960s he began his Med-Chi activities by serving in the House of Delegates. Since then he has chaired the Task Force on Peer Review, has been an AMA Delegate, and has been Chairman of the Council. His record reflects his conviction that there is a definite need for organized medicine.

> What would I say to a new person coming in? I would tell them that in today's climate you can't simply practice medicine; you can't just see patients; you have to be involved in the mechanics of organized medicine in order to survive.

### Issues and Challenges

Dr. Dobridge maintains that a strong organization can deal with whatever problems arise. A challenge for him is to see Med-Chi's House of Delegates become a more active, involved body because the House of Delegates is the voting body of the organization (see chart). The Council is participating more than it ever has in the decision-making process, and the Executive Committee and the Council have developed a good rapport. Historically, however, the House of Delegates has not been as directly involved. He hopes the House will begin to look at issues and actively bring new programs forward through the Reference Committee rather than wait for an annual or semiannual meeting for resolutions to be presented for their approval. He would prefer to see the House in a more proactive stance.

> If we get the Executive Committee, the Council and the House of Delegates working, and keep the auxiliary becoming more and more involved, we will have the finest state society in this country and get things done.

A forthright and purposeful man, Dr. Dobridge insists that Med-Chi (or any other medical organization) cannot step aside to let others write the regulations that allow someone else to run the show. A strong organization must talk about the issues and resolve problems.

Dr. Dobridge considers medicine a healing art. A person must be interested in the art of healing or he or she should not be in medicine. Physicians today have more knowledge, procedures, and treatments available enabling them to help people survive. That is why physicians cannot be deterred by outside forces that might prevent them from delivering good medical care. This is where organized medicine comes in.

Med-Chi has become very effective, enjoys credibility, has good access to Annapolis, and is constantly looking at new programs. Dr. Dobridge says "This has taken the efforts of a lot of people and with this increasing position of strength, we can show all physicians the value of becoming involved." Nonetheless, Med-Chi faces a challenge of developing membership since some people still do not seem to realize the importance of organized medicine. (This holds true at all levels of medical organizations--local, state, and national.)

One of the issues addressed in the recently completed legislative session dealt with professional relations. In most other states, disciplinary actions are handled under a Licensure Board. Unfortunately, the system that is used to evaluate state-by-state discipline problems is totally ineffective because the criteria vary among the states. Many states report physicians who have drug and alcohol problems or are mentally impaired. Maryland, however, has a physician rehabilitation program. Consequently, there are some communication problems in dealing with the public's perception of physician discipline.

## Medical and Chirurgical Faculty of the State of Maryland

**General Membership**

**Through Participation in one of the 24 component Medical Societies or in the resident or student society**

**House Of Delegates**

**Legislative Body with all power and authorthy over the affairs of the faculty**

**One delegate from each component society, plus 1 delegate for each 50 members or fraction there of in a component society; 1 delegate from the student society and 1 from the resident society; the members of council; 1 member of the Board of Medical Examiners; and all past Presidents.**

**Council**

**Shall have all power and authority over the affairs of the House of Delegates except that of modifying any action taken by the House.**

**Elected officers, immediate past President the Deans of Maryland 's medical schools, and Delegates to the American Medical Association.**

**Executive Committee of Council**

**Advisory body in question of immediate importance in the interm between meetings of the council.**

**The Chairman and Vice-Chairman of Council, President, President Elect, immediate past President, Secretary, Tresurer.**

**Committees of the Faculty**

**Appointed annually by the President**

Dr. Dobridge is confident that the new law creating the Physicians' Quality Assurance Board (a reorganization of the Board of Medical Examiners and the Commission on Medical Discipline) is going to be an enormous help. With more funding, more investigative and administrative personnel, it is in the physicians' hands. We have to do a good job or be prepared to see it turned over to another group, that is, attorneys. This centralized concept increases demands on new Board members. The access to and the demands for the details of medical care are a tremendous responsibility.

Speaking on the malpractice insurance issue, Dr. Dobridge said there is a direct correlation between the increase in the malpractice premiums and the number of physicians who will leave practice. A zero increase in insurance rates, which he thinks is appropriate, would make a lot of physicians realize that they are reaping the benefits of Med-Chi's legislative efforts.

A very good attorney who specializes in defending physicians told Dr. Dobridge that "Medicine has oversold itself." People think when they go to see a physician they are going to get a miracle. As Dr. Dobridge puts it, "There used to be jokes about physicians thinking they were God. Now the patients think physicians approach a God-like level in what they can do." The malpractice issue has been blown out of proportion due to the public's expectations, but there are occasionally bona fide cases of negligence where the injured party should be compensated.

Two other current issues pertain to financing the delivery of health care. The Harvard/AMA Relative Value Scales Project is a study that could have a real impact on medicine. Although there is controversy over the study, the AMA Board of Trustees remains convinced that this study could provide a basis for a Medicare physician reimbursement system that would be acceptable to the federal government, Medicare beneficiaries, and medicine. However, the AMA does reserve the right to disenfranchise itself from the study if it becomes apparent the study is going to mean unfavorable actions for medicine.

Another controversial topic Med-Chi has looked at is the development of a care delivery system. Of all the systems, the most feasible is the preferred provider concept (PPO). It doesn't require a multimillion dollar expenditure since a physician joins an organization that is prepared to negotiate with one or two carriers to provide care. If Maryland physicians are interested in this, they need to be extremely careful because doctors throughout the state have different problems. It would be very difficult to have a specific PPO for the entire state.

### Goals and Concerns Over Quality Care

Concerned with the present climate of medicine, Dr. Dobridge knows that there is a problem with physician

morale. This situation has several causes, such as the ever-present threat of increasing state regulation (as well as at county level), the arbitrary nature of some of the HMO-type difficulties, and the federal government controls. If physicians have no control over health care decisions, the patients ultimarely will bear the consequences. They will see higher insurance premiums and higher cost of delivery of service. Physicians have a primary responsibility to the patient and have to be prepared to adhere to a high standard of quality care. Each individual patient is so important. "The climate demands that attending physicians maintain a rapport with the individual patient and develop a sense of understanding as to what's happening in the delivery of care. It's an absolute must," according to Dr. Dobridge.

Physicians also have to be concerned with their relationships to hospitals. Dr. Dobridge believes it is a hospital-by-hospital situation. Some hospitals are developing adversarial positions having to do with pressures induced by funding, restraints of Medicare, cost factors, and nursing shortages; these are real problems. Still, physicians remain obliged to deliver quality care. If a hospital is failing to live up to the standards demanded by the physicians, then that is a problem that can be resolved.

Med-Chi is here to help, and that is the reason physicians should become involved. As you build a strong organization, things begin to happen. People work together, they share common goals, and together become much more effective. As Dr. Dobridge emphasizes, "That is the real essence in being involved in Med-Chi."

**Family and Interests**

Dr. and Mrs. Dobridge have three daughters ages seven, five, and three, who he says are beautiful, bright, keen as can be, and the joy of his life. The Dobridges are subscribers to the Washington Ballet and attend the Kennedy Center quite regularly. He enjoys some sports activities, especially swimming, and has a private pilot's license. Although he and his family have put a priority on his time as President of Med-Chi, he believes one has to take the time to be with family. He says a very real factor in allowing him to have more time with his family is the good organizational people at Med-Chi. Already, for him, his association with Med-Chi has been a very rewarding experience.

He is happy to be a participant in bringing people together so that, jointly, beneficial decisions can be made. It is by helping people modify their positions and work together that an organization progresses. If an organization polarizes on issues, it is neutralized. The last couple of years has seen Med-Chi become more and more effective. Increasingly, the organization is working in a unified, cohesive manner. He is proud to have had some role in that. Dr. Dobridge's zeal, devotion, and initiative make him a valuable asset both for Med-Chi and for Maryland medicine.



*Michael and Jane Dobridge with daughters Christene, Lauren, and Susan.*

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*Incoming president Michael R. Dobridge MD (left) receiving the presidential gavel from his predecessor, Leon E. Kassel MD.*

# Medical and Chirurgical Faculty of the State of Maryland
## 190th Annual Session - Baltimore Convention Center
## First Meeting, April 27, 1988 (323rd Meeting)
## Minutes, House of Delegates

The 323rd meeting, first of the 190th Annual Session of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 9:35 a.m., the President, Leon E. Kassel MD, and the Secretary, Raymond M. Atkins MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council Member:

**ALLEGANY COUNTY**
* Augusto F. Figueroa
Elmaslias Menchavez
Sikander L. Sandhir

**ANNE ARUNDEL COUNTY**
Leoncio A. Cecarelli
Thomas C. Cullis
Michael J. La Penta

**BALTIMORE CITY**
Aristides Alevizatos
* Ian R. Anderson
Donald M. Barrick
* Annie Bestebreurtje
Gaylord L. Clark
* Willarda V. Edwards
* Albert Folgueras
Frank Giargiana, Jr.
Robert B. Goldstein
* Rafael C. Haciski
John H. Hirschfeld
* Joseph H. Hooper
* Allan D. Jensen
Murray A. Kalish
* J. Lichtenfeld
Raymond S. Magno
* John B. MacGibbon
* Albert Nahum
Samuel I. O'Mansky
* Rosemary Olivo
William F. Renner
J. Courtland Robinson
Bernard R. Shochet
Edward Suarez-Murias
J. Andrew Sumner
* Alan J. Sweatman
Karl H. Weaver
* Richard B. Williams
Kennard L. Yaffe
Joseph W. Zebley, III
Jack M. Zimmerman

**BALTIMORE COUNTY**
Thomas E. Allen
Marianne Benkert
* Albert L. Blumberg
Harold B. Bob
Louis C. Breschi
John W. Buckley
Clarence W. Gehris
* Deusdedit Jolbitado
Bernard S. Kleiman
Paul G. Koukoulas
John M. Krager
Mayer C. Liebman
N. Edward Nachlas, Sr.
Allen G. Scott
Margaret L. Sherrard
John F. Strahan
H. Margaret Zassenhaus

**CARROLL COUNTY**
Alva S. Baker(C)

**CECIL COUNTY**
Andrew P. Fridberg(C)

**CHARLES COUNTY**
Daniel M. Howell
Guillermo E. Sanchez

**DORCHESTER COUNTY**
Paul A. Stagg

**GARRETT COUNTY**
Herbert H. Leighton(C)

**HARFORD COUNTY**
Philip W. Heuman
Ben E. Oteyza

**HOWARD COUNTY**
Frederick Bergmann
Thomas F. Herbert

**KENT COUNTY**
Harry P. Ross

**MONTGOMERY COUNTY**
Carol Bender
* Dewitt DeLawter
Larry Einbinder
Lawrence H. Fink
Charles H. Ligon
Ralph E. Longway
Herman Maganzini
Francis C. Mayle
Edward S. Mehlman
* Edward J. Richards
* Peter B. Sherer
Margaret T. Snow
Thomas M. Wilson

**PRINCE GEORGE'S COUNTY**
John E. Jeffrey
Andres C. Lara
Zoraydo Lee-Llacer
Ricardo Longoria
* Imad S. Mufarrij
Abdul Nayeem
David Robb
* Elie A. Sayan
Elliece S. Smith
Frederick Wilhelm
* Michael F. York

**QUEEN ANNE'S COUNTY**
John R. Smith, Jr.(C)

**ST. MARY'S COUNTY**
J. Roy Guyther (C)

**TALBOT COUNTY**
Gregg Rhodes

**WASHINGTON COUNTY**
Max E. Byrkit
Edward W. Ditto, III

**WICOMICO COUNTY**
Alex Azar

**WORCESTER COUNTY**
* Francis Townsend

**COUNCIL**
Albert M. Antlitz
Raymond M. Atkins
James E. Bell
Paul Bormel
Aurellio DeLaPaz
Benjamin Del Carmen
Donald H. Dembo
Michael Dobridge
Joseph S. Fastow
Vincent Fitzpatrick
Frederick J. Hatem
Leon E. Kassel
Robert C. Kindred
Henry P. Laughlin
Reynaldo Lee-Llacer
Donald T. Lewers
George S. Malouf
Leslie R. Miles, Jr.

John H. Mulholland
J. David Nagel
Hiroshi Nakazawa
David O'Brien
Charles F. O'Donnell
Hilary T. O'Herlihy
Gary L. Rosenberg
Marvin Schneider
Aubrey C. Smoot
Roland T. Smoot
Joseph Snyder
Donald W. Wiczer
Jose M. Yosuico
Israel H. Weiner

**BOARD OF MEDICAL EXAMINERS**
Arthur T. Keefe, Jr.

**RESIDENT COMPONENT**
Marcel Salive(C)

**STUDENT COMPONENT**
William Venanzi(C)

Also present were members of the Faculty staff

---

### Invocation

Leslie R. Miles, Jr., MD, Chairman of the Committee on Medicine and Religion, delivered the invocation.

### "Americana"

"Americana," a film presentation provided by the AMA, was shown and was well-received by the members of the House.

### Guests

Alan Rifkin, Administrative Aide to Governor Schaefer, and Senator Mike Miller, President of the Maryland Senate, addressed the House and expressed appreciation to the physicians for their support during the 1988 legislative session.

The President introduced the following guests to the House of Delegates:

- Glen B. Updike MD - President Medical Society of Virginia
- David M. Seitzman MD, President-elect Medical Society of DC
- Cordell DeLaPena MD, President West Virginia State Medical Society
- Martin J. Cosgrove MD, President Delaware Medical Society
- Ms. Nancy Kintzel - AMA Field Representative

### Announcements

The President made certain announcements, advising of various rules for conduct of House business, as well as information on various scientific and social functions scheduled for the session.

### Med-Mutual Election

Dr. Kassel, President, announced that the Med-Mutual election took place on April 26, 1988; elected were:

Raymond M. Yow MD
Gerald J. Carroll MD
Angelo J. Troisi
Edward J. DellaVecchia
Thomas J. Rohe, III

### President's Remarks

The President addressed the House and expressed his appreciation for the privilege of serving as President.

### Minutes Approved

The minutes of the Semiannual Session of the House of Delegates held on Saturday, September 26, 1987 in Baltimore, Maryland, having been distributed to all members and corrected and approved by the Executive Committee, were approved by the House of Delegates.

### Necrology

The members of the House of Delegates rose in respect for deceased colleagues as the Secretary read the following necrology:

**Allegany County**
Leo Ley MD - January 18, 1988
William O. McLane MD - April 14, 1987
Saville G. Weisman MD - November 17, 1987

**Anne Arundel County**
Hari K. Bhasin MD - May 17, 1987
Marshall K. Steele MD - August 30, 1987
Martin J. Valaske MD - November 9, 1987

**Baltimore City**
Edward J. Alessi MD - February 8, 1988
Franklin L. Angell MD - January 24, 1988
Henry Bongardt MD - December 5, 1986
Leo Brady MD - November 27, 1987
Nathan Chiodi MD - September 14, 1987
W. Bowdoin Davis MD - August 27, 1987
Maurice Feldman, Jr., MD - January 23, 1988
Louis E. Goodman MD - July 18, 1987
Lewis P. Gundry MD - August 10, 1987
Fereydoon Hadi MD - November 30, 1987
D. Frank Kaltreider MD - January 8, 1988
Alp M. Karahasan MD - January 27, 1988
Leo Lally MD - January 3, 1988
Angus L. MacLean MD - January 10, 1988
George McLean MD - February 7, 1988
Helen I. Maginnis MD - June 20, 1987
Karl F. Mech MD - May 10, 1987
William F. Pearce MD - March 28, 1988
James R. Powder MD - May 10, 1987
Thomas G. Prempas MD - January 13, 1987
H. Melvin Radman MD - July 26, 1987
Daniel S. Shanahan MD - November 11, 1987
Ernest L. Stebbens MD - April 30, 1987
Kyle Y. Swisher MD - March 15, 1988

**Baltimore County**
Jose R. Arizaga MD - May 7, 1987
Frank W. Baker MD - June 20, 1987
Ernest I. Cornbrooks, Jr., MD - June 27, 1987
Robert M.N. Crosby MD - August 18, 1987
Lester N. Kolman MD - August 25, 1987
Ramon S. Pimentel MD - September 9, 1987
John C. Pound MD - July 15, 1987
Kent E. Robinson MD - August 7, 1987
William C. Wade MD - July 27, 1987

**Carroll County**
Thomas A. Campbell MD - February 4, 1988

**Dorchester County**
Thomas K. Mahan MD - July 23, 1987

**Harford County**
Addison L. Lewis MD - November 23, 1985
Richard B. Norment MD - May 29, 1987

**Montgomery County**
John G. Ball MD - March 19, 1987
Frederick Donn MD - November 4, 1987
Albert A. Greenfield MD - September 1, 1985
Lewis A. Klein MD - June 1, 1987
Naomi T. Lucuis MD - August 27, 1987
Vito J. Murgolo MD - February 19, 1988
Harry Pomerantz MD - May 29, 1987
Hsiang L. Tseng MD - November 25, 1986
Maurice Van Kinsbergen MD - December 27, 1987
John A. Washington MD - September 22, 1987
Robert R. Williams MD - July 30, 1987

**Prince George's County**
John H. Bayly MD - May 31, 1987
Victor G. Cantizano MD - August 23, 1987
William M. Dixon MD - June 30, 1987
Irvin M. Grassgreen MD - August 23, 1987
H. Jack Hudson MD - November 14, 1987
Robert S. McCeney MD - February 20, 1988
Magin L. Quiambao MD - May 11, 1987
Arsenio S. Soriano, Jr., MD - December 18, 1987

**Queen Anne's County**
Theodore Sattelmaier MD - May 3, 1987

**Talbot County**
Vincent O. Eareckson MD - February 29, 1988
Kurt L. Lederer MD - February 1, 1988

**Washington County**
Edgar T. Campbell MD - July 27, 1987
William T. Layman MD - October 30, 1987

**Wicomico County**
G. Herbert Scmbly MD - May 29, 1987

**Affiliates**
Edgar Berman MD - November 25, 1987
Alfred S. Norton MD - January 28, 1988
I.R. Ross MD - August 28, 1987

### Memorial Resolutions

On motions of the Secretary, the following resolutions were adopted unanimously by the House, each on a separate division vote:

### Franklin L. Angell MD, FACR
### 1924 - 1988

Whereas, the untimely death of Franklin L. Angell MD on January 24, 1988 was a great loss to the local and national medical community;

Whereas, Dr. Angell, a native of Roanoke, Virginia, received his Doctorate of Medicine from the Medical College of Virginia in 1947, and, thereafter trained and practiced in pediatrics in Virginia until 1965 when he entered a residency program in Radiology at Harper Hospital,Detroit, Michigan;

Whereas, Dr. Angell was Director of Radiological Education and Co-Director, National Institute of Health Training Grant at the Massachusetts General Hospital from 1968-1970 and then came to Baltimore as Chairman, Department of Radiology at Mercy Hospital;

Whereas, Dr. Angell was an active member of the Baltimore City Medical Society and the Medical and Chirurgical Faculty of the State of Maryland serving in the House of Delegates, as Chairman of the Cost Containment Committee and as a member of the Health Care Delivery Committee, Legislative Committee and Public Relations Committee of Baltimore City Medical Society;

Whereas, Dr. Angell demonstrated zeal and leadership in the practice of Radiology through his activities in the Maryland Radiological Society as a member of the Board of Directors and as President, and in the American College of Radiology as Chairman of many commissions and President of its Council, member of the Board of Chancellors, and was Chairman Designate of the Board of Chancellors; and

Whereas, Dr. Angell gave unselfishly of himself to the furtherance of the practice of medicine, especially radiology; therefore be it

*Resolved*, That the House of Delegates of the Medical and Chirurgical Faculty of Maryland on April 27, 1988, expresses its deep sorrow on the death of its distinguished member, Franklin L. Angell, M.D., and be it further

*Resolved*, That this resolution be spread upon the minutes of this meeting and a copy be sent to his wife, Mrs. Amy G. Angell, and his children, Vicki, Robert, and Elizabeth, in honor of the eminence of his life.

### D. Frank Kaltreider MD
### 1912 - 1988

Whereas, D. Frank Kaltreider MD, a physician, a teacher, a community activist, died on January 8, 1988;

Whereas, Dr. Kaltreider, a native of Red Lion, Pennsyl-

vania, received his Medical Degree from the University of Maryland in 1937 and served his residency in obstetrics and gynecology at Baltimore City Hospitals where he was Chief of the Department of Obstetrics from 1962 to 1975;

Whereas, Dr. Kaltreider began his teaching career at the University of Maryland in 1949, became professor of obstetrics and gynecology in 1955, and was an associate professor at Hopkins University Medical School from 1975 until his retirement in 1981;

Whereas, Dr. Kaltreider served as president of the University Hospital medical staff, the University of Maryland Medical School Alumni Association, the Douglass OB-GYN Society, the Maryland Obstetrics and Gyncology Society;

Whereas, Dr. Kaltreider was a member of the Medical and Chirurgical Faculty of Maryland where he worked for the provision of high quality care to pregnant women and their babies as Chairman of the Maternal and Child Health Committee and a member of several other committees;

Whereas, Dr. Kaltreider was a member and/or chairman of numerous committees within the Baltimore City Medical Society including the Ad Hoc Committee on Ethics in Advertising, the Program Committee, the Finance Committee, the Areawide Health Planning Committee of the Regional Planning Council, the Board of Directors and President of a private non-profit Rh testing laboratory

Whereas, Dr. Kaltreider gave freely of his time and expertise in treating the poor, working with the March of Dimes and Planned Parenthood, and was a founder of a private non-profit Rh testing laboratory in Baltimore; therefore, be it

*Resolved*, That this House of Delegates of the Medical and Chirurgical Faculty of Maryland on April 27, 1988, expresses its great sadness at the loss of D. Frank Kaltreider, M.D., an esteemed member of the medical community in Maryland and extends its deepest sympathy to his wife, Lenna Brannock Kaltreider and to his children, Leigh MClure, Kurt Kaltreider, and D. Frank Kaltreider, II.

### Congratulatory Resolution John M. Dennis MD

On motion of the Secretary, Dr. Raymond Atkins, the following congratulatory resolution was adopted unimously by the House:

### Special Honor and Tribute to John M. Dennis MD

Whereas, John M. Dennis MD, Dean, has given 43 years of distinguished service as a scholar and clinician;

Whereas, Dr. Dennis has been a member of many committees of both Baltimore City Medical Society and the Medical and Chirurgical Faculty of the State of Maryland; most notably Chairman of the committee to establish the Commission on Medical Discipline and was the first Chairman of that Commission, 1969-1973;

Whereas, Dr. Dennis has been Professor and Chairman, Department of Radiology, University of Maryland School of Medicine; Vice Chancellor for Health Affairs, University of Maryland at Baltimore, and Vice Chancellor for Academic Affairs, University of Maryland at Baltimore, and Dean, University of Maryland School of Medicine;

Whereas, Dr. Dennis has an international and outstanding reputation as a radiologist, and in 1980, received the American College of Radiology highest award, the "Gold Medal;"

Whereas, Dr. Dennis has served as President and as Chairman, of the Board of Chancellors of the American College of Radiology;

Whereas, Dr. Dennis has had tremendous influence on the training of medical students and residents in Maryland and in the nation;

Whereas, Dr. Dennis has given tirelessly of his time, his leadership, and his wisdom in the pursuance of high quality medical care; and

Whereas, Dr. Dennis will retire on June 30, 1988 as Dean of the University of Maryland School of Medicine; therefore be it

*Resolved*, That the House of Delegates of the Medical and Chirurgical Faculty of Maryland on April 27, 1988, extends to John M. Dennis, M.D., its deep appreciation for his many contributions to medical education and to the practice of medicine and pays tribute to him on this occasion.

### Fifty-Year Members

Presentation of Fifty-Year certificates and pins by the President to the following members took place with the awards being mailed to those unable to attend:

**Baltimore City**
Leon Ashman MD
Nachman Davidson MD
Abram Goldman MD
Jeannette Heghinian MD
Reuben Hoffman MD

**Baltimore County**
Charles B. Marek MD
Hugh B. McNally MD

**Prince George's County**
George J. Hageage MD
Lawrence W. Malin MD

### Emeritus Members

On motion of Dr. Reynaldo Lee-Llacer, Council Chairman, the following members, having received the recommendations of their component societies and that of the Council, were elected to Emeritus Membership:

**Council Recommendation**
Frederick E. Musser MD, Woodsboro

**Allegany County**
Thaddeus H. Elder, Jr., MD, Cumberland




*(ciprofloxacin HCl/Miles)*




# A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- **Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa****
- **For treatment of infections in the:**
  - **lower respiratory tract†**
  - **urinary tract†**
  - **skin/skin structure†**
  - **bones and joints†**
- **Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets**

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

†**Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CIPRO® SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

MILES

Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

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C09327 MLR-261

# Cipro® TABLETS
## (ciprofloxacin HCl/Miles)

**■ 500 mg *B.I.D.* for most infections;**
**750 mg *B.I.D.* for severe or complicated infections.**

### BRIEF SUMMARY
### CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

#### INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

**Lower Respiratory Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae.*

**Skin and Skin Structure Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes.*

**Bone and Joint Infections** caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa.*

**Urinary Tract Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis.*

**Infectious Diarrhea** caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri** and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

#### CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

#### WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

#### PRECAUTIONS

*General:*

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

*Drug Interactions:*

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

*Information for Patients:*

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

*Carcinogenesis, Mutagenesis, Impairment of Fertility:*

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster $V_{79}$ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

*Pregnancy – Pregnancy Category C:*

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

*Nursing Mothers:*

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

*Pediatric Use:*

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

#### ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

*Adverse Laboratory Changes:* Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

#### OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

#### DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

#### HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

# CONVENIENT *B.I.D.* DOSAGE

## Recommended dosage schedule

| Infection Site* | Severity of Infection | Dosage |
|---|---|---|
| Respiratory Tract* Bone and Joint* Skin/Skin Structure* | Mild/Moderate | 500 mg *B.I.D.* |
| | Severe/Complicated | 750 mg *B.I.D.* |
| Urinary Tract* | Mild/Moderate | 250 mg *B.I.D.* |
| | Severe/Complicated | 500 mg *B.I.D.* |
| Infectious Diarrhea* | Mild/Moderate/Severe | 500 mg *B.I.D.* |

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

For further information, contact the Miles Information Service: 1-800-642-4776. In VA. call collect: 703-391-7888.

**COMMITTED TO THERAPEUTIC EFFICIENCY**

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## ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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**ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.**

# A NEW $H_2$ Antagonist

# AXID® 300mg

## nizatidine

Effective once-nightly
duodenal ulcer therapy available in a

## *Unique Convenience Pak*

for better patient compliance




**AXID®**
nizatidine capsules

**Brief Summary. Consult the package insert for prescribing information.**

**Indications and Usage:** Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

**Contraindication:** Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other $H_2$-receptor antagonists.

**Precautions:** *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

*Laboratory Tests*—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

*Drug Interactions*—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

*Carcinogenesis, Mutagenesis, Impairment of Fertility*—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

*Pregnancy—Teratogenic Effects—Pregnancy Category C*—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

*Nursing Mothers*—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

*Pediatric Use*—Safety and effectiveness in children have not been established.

*Use in Elderly Patients*—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

*Hepatic*—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

*Cardiovascular*—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

*Endocrine*—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

*Hematologic*—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another $H_2$-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

*Integumental*—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

*Other*—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

**Overdosage:** There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous $LD_{50}$ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

Eli Lilly and Company
Indianapolis, Indiana
46285

NZ-2903-B-849356

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William P. Iames MD, Cumberland
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**Affiliate**
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Albert B. Esquenazi MD, Miami Beach, FL
Nicholas White MD, Boca Raton, FL

## Resolution 1A/88

Dr. Lee-Llacer, on behalf of the Council, moved adoption of a late resolution, which was adopted unanimously, as follows:

**Resolution on Voluntary Banning of Tobacco Use on School Property**

Whereas, Cigarette smoking is a major cause of death, disease, and high medical costs in the United States;

Whereas, Nicotine is not only a drug but an addictive drug;

Whereas, Schools must be drug free environments in order to promote drug free lifestyles and good health practices in students; and

Whereas, Educators are models of behavior for students; therefore, be it

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland commends all teachers, administrators and school systems that do not permit the use of tobacco products by faculty and staff and students on school property; and

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland encourages other teachers and administrators of both private and public schools in Maryland individually and through their professional organizations to voluntarily ban the use of tobacco products on school property by all adult staff; and be it further

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland call upon the Maryland State Teacher's Association, the Maryland Chapter of the National Education Association, the Archdiocese of Baltimore, the Maryland Association of Elementary School Principals, and the Maryland Association of Secondary School Principals to adopt the position of calling for their members to ban the use of tobacco products on school property by faculty and administrators.

## Resolution 2A/88

On behalf of the Council, Dr. Lee-Lacer, moved adoption of the following late resolution, which was adopted unanimously by the House:

**Resolution on Removal of Tobacco Products from Pharmacies**

Whereas, Cigarette smoking is the number one cause of death, disease, and high medical costs in the United States;

Whereas, Physicians and pharmacists are truly partners in health care;

Whereas, According to market studies, twenty-five percent of all cigarette purchases are made in drugstores;

Whereas, It is contrary to all known ethical codes to sanction or profit from the sale of a product with such devastating effects; and cigarettes would, in most cases, be a corporate one; therefore, be it

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland commend those pharmacists and pharmacy owners who have chosen not to sell tobacco products; and

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland encourage other pharmacists and pharmacy owners individually and through their professional associations, to remove tobacco products from their stores; and be it therefore

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland call upon the Maryland Pharmaceutical Association and other pharmaceutical associations to adopt a position calling for their members to remove tobacco products from their stores.

### Treasurer's Report

Jose M. Yosuico MD, Treasurer, made a brief report on the 1987 budget as adopted by Council that was distributed to all members prior to the meeting.

### Bylaws Committee

Dr. Harold B. Bob, Bylaws Committee Chairman, on-behalf of the Bylaws Committee, moved adoption of the following bylaw amendments that, by unanimous consent, were considered together and after debate, were adopted by the required 2/3 vote:

- Amend Article XI, Section 4 (Computers in Medicine Committee), following the words "Its chairman" and before the words" shall be appointed" by inserting the words "and members" and by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 8 (Committee on Drugs), following the words "Its chairman" and before the words "shall be appointed" by inserting the words" and members" and by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 13 (Finney Fund Committee), by striking out the sentence "It shall elect its own chairman." and inserting the words "The President shall designate the chairman."
- Amend Article XI, Section 16 (Liaison Committee with Third Party Carriers), in the first sentence following the word "President" by adding the words "who shall designate the Chairman."
- Amend Article XI, Section 18 (Liaison Committee with Department of Health and Mental Hygiene), in the first sentence following the word "President" by adding the words "who shall designate the Chairman."
- Amend Article XI, Section 22 (Medicolegal Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members' and by striking out the words "and said Chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 24 (Occupational Health Committee), following the words "Its Chairman" and before the words "shall be appointed" by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 26 (Committee on Physician Assistants), in the first sentence following the word "President" by adding the words "who shall designate the Chairman" and by striking out the second sentence, "It shall elect its own chairman."
- Amend Article XI, Section 28 (Physician Rehabilitation Committee), in the first sentence following the word "President" by adding the words "who shall appoint the following members:" and by striking out the words "and the following members appointed by the Chairman with the approval of the President:".
- Amend Article XI, Section 30 (Preventive Medicine and Public Health Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "with the members of the committee appointed by the Chairman with the approval of the President."
- Amend Article XI, Section 33 (Public Relations Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "and said Chairman shall appoint the other members of the committee with the approval of the President."

### CMER Committee

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment, which was adopted without dissent:

- Amend Article XI, Section 5 (Committee on Continuing Medical Education Review) in the first sentence following the words "advise upon" by striking the word "all" and inserting the word "continuing" and after the words "education matters" by striking the words "with emphasis on post graduate educational offerings;" in the second sentence, following the word "survey" by striking the word "specified" and inserting the words "and accredit qualified;" and in the last sentence following the words "The Chairman" by inserting the words "and members" and by striking out the words "with members of the committee appointed by the Chairman with the approval of the President."

### Committee on Small Area Practice Variation

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment which received the required 2/3 vote and was adopted as follows:

- Amend Article XI, Section 6, Committee on Cost Effective Medical Care, by substituing for it the following new section:

"Section 6. A COMMITTEE ON SMALL AREA PRACTICE VARIATION consisting of at least five members shall be appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience and interest in small area analysis and medical practice variation. The committee shall act as an analytical group to review studies conducted by outside organizations and shall be authorized to conduct independent studies upon approval by the Executive Committee."

### Committee on Emergency Medical Services

Dr. Bob, Chairman of the Bylaws Committee, move adoption of the following bylaw amendment that after debate, was adopted by the required two-third vote

- Amend Article XI (Committees), Section 10, in the first sentence following the words "composed of those" and before the word "physician" by inserting the words "interested members as well as"; and following the words "representatives of" by striking out the words "all hospitals" and inserting the words "each hospital"; and following the word "activity" by striking out the word "shall" and inserting the word "may"; and in the third sentence following the word "public" by striking out the word "shall" and inserting the word "may."

### Committee on Mental Health

Dr. Bob, Chairman of the Bylaws Committee, moved adoption of the followiing bylaw amendment that, after debate, was adopted by the required two-thirds vote

- Amend Article XI (Committees), Section 11, in the first sentence following the words "COMMITTEE ON" and before the word "HEALTH" by striking out the word "EMOTIONAL" and inserting the word "MENTAL," and in the last sentence following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."

### Committee on Health Manpower and Planning

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment that was adopted unanimous consent

- Amend Article XI (Committees), Section 14, by striking out this section in its entirety as follows (subsequent sections being automatically redesignated):

"Section 14. A COMMITTEE ON HEALTH MANPOWER AND PLANNING of at least nine members shall be appointed annually by the President. The committee shall have as its duty the monitoring of developments in health planning at local, state, and national levels; the dissemination of such information it obtains to the House of Delegates, appropriate Faculty committees, component societies, and individual members of the Faculty; the monitoring primarily of the distribution of physicians in the state by county, specialty, and other suitable breakdowns through the collection and analysis of all available data on physician manpower as well as public needs; and involve itself generally in analysis of the socioeconomic issues, and other pertinent areas of interest. The committee may recommend action to the Faculty's governing bodies, appropriate Faculty committees, and component societies. The President shall designate the Chairman of the committee annually."

### Committee on Long-Term Care and Geriatrics

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment, that was adopted by unanimous consent

- Amend Article XI (Committees). Section 19, in the first sentence following the word "President" and before the word "each" by inserting the words "who shall designate the Chairman."; in the second sentence following the words "geriatrics facilities" and before the word "development" by inserting the words "geriatric rehabilitation facilities, and home health care services," and following the words "in such facilities" and before the words "the goals" by striking out the words "provide for means of review that" and inserting the words "and by outpatient and home health care service providers; serve in an advisory capacity to ensure that."

### Medicine and Religion Committee

Dr. Bob, on behalf of the Bylaws Committee, moved the adoption of the following bylaw amendment that, after debate, was recommitted to the Medicine and Religion Committee for reconsideration of the term "moral."

- Amend Article XI (Committees), Section 21, following the words "less than" by striking out the words "six members and inserting the words "four or more than eight members," and in the last sentence following the word "It" and before the words "shall also endeavor" by inserting the words "shall serve as a moral values committee of the Faculty and."

### Peer Review Committee

Dr. Bob, on behalf of the Bylaws Committee, announced withdrawal of the proposed bylaw amendment to

- Article XI, Section 25 (Peer Review Committee), due to additional changes required by recent legislation establishing the new Physicians Quality Assurance Board. There being no objection, the bylaw amendment was withdrawn.

### Committee on Specialist Identification

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of a proposed amendment to the bylaw amendment that was adopted unanimously, followed by adoption of the bylaw amendment, as amended, by the required two-thirds vote as follows:

- Amend Article XI (Committees) by inserting after Section 35 a new Section 36 (subsequent sections automatically redesignated):

Section 36. A COMMITTEE ON SPECIALIST IDENTIFICATION of at least nine members shall be appointed annually by the President; one of whom the President shall designate as Chairman. The committee shall review applications received by the Physicians Quality Assurance Board and referred to the Faculty for recommendation on identification of medical specialty.

### AMA-ERF Checks Presented

Checks in the amount of $15,633.95 in unrestricted funds and $2,862.33 in restricted funds were presented to Dr. Simeon Margolis, Associate Dean for Academic Affairs of the Johns Hopkins University School of Medicine; $2,658.33 in unrestricted funds and $323.34 in restricted funds were presented to Dr. Jay P. Sanford, President of the Uniformed Services University of the Health Sciences; and $23,843.70 in unrestricted funds and $5,205,73 in restricted funds were presented to Dr. John M. Dennis, Dean, University of Maryland School of Medicine. Mrs. Elizabeth Linhardt, Chairman of the AMA-ERF in Maryland and Mrs. Ching Barretto, President of the Auxiliary, participated in the presentation of the checks.

### AMA-MSS Membership Recruitment

Dr. John M. Dennis, Dean, University of Maryland School of Medicine was presented with the AMA-MSS Membership Recruitment Award in the form of a plaque in recognition of Daniel Paoli, student, for his outstanding efforts in recruiting 27 new members in the 1987 Medical Student Outreach Program.

### A.H. Robins Award

The President presented the A.H. Robins Award for Community Service to Albert M. Antlitz MD for his outstanding contributions to the citizens of Maryland and his commitment to the delivery of quality health care.

### Certificates of Appreciation

The President presented Certificates of Appreciation to the following physicians for outstanding service and dedication as chairmen of their respective committees:

**Dr. Leonard Lichtenfeld,** Co-Chairman
Legislative Committee

**Dr. Victor Hrehorovich,** Chairman
Committee on Hospital Medical Staffs

**Dr. Gerry Oster,** Chairman
Committee on Computers in Medicine

### Photo Contest

The President announced winners of the Photo Contest:
Color:
1st Place - **Michael Liteanu** MD
2nd Place - **Jerold Post** MD
Black & White:
1st Place - **Mohammad Inayatullah** MD
2nd Place - **William Goodman** MD

### Nominating Committee Report

Dr. Donald T. Lewers, Immediate Past President and Chairman of the Nominating Committee, on behalf of the Nominating Committee, presented the following slate of officers to the House of Delegates:

President-elect
Raymond M. Atkins, Baltimore, Baltimore City
(President-elect 1988-89) (President, 1989-90)
First Vice-President
Marvin Schneider, Wheaton,
Montgomery County (1989)
Second Vice-President
Bahram Erfan, Riverdale,
Prince George's County (1989)
Third Vice-President
Alex Azar, Salisbury, Wicomico County (1989)
Secretary
Harold B. Bob, Baltimore, Baltimore County (1989)
Treasurer
Jose M. Yosuico, Baltimore, Baltimore City (1989)
Committee on Scientific Activity
(6 year term - 1989-1995)
Benjamin V. Del Carmen, Baltimore, Baltimore County
Finney Fund Committee (5 year term - 1989-1994)
Edmund G. Beacham, Baltimore, Baltimore City
Delegates to the AMA
John H. Hebb, Baltimore, Baltimore County
(January 1, 1989 - December 31, 1991)
Michael R. Dobridge,Silver Spring,Montgomery County
(January 1, 1989 - December 31, 1989)
Alternate Delegates to the AMA
Joseph Snyder, Silver Spring, Montgomery County
(January 1, 1989 - December 31, 1991)
Alex Azar, Salisbury, Wicomico County
(January 1, 1989 - December 31, 1991)

The floor was opened to further nominations for these offices; there being none, nominations were declared closed by general consent.

The President announced that the election for these positions would take place as the first item of business at the session scheduled for Friday, April 29, 1988 at 2:00 p.m.

The meeting was adjourned at 12:11 p.m. by unanimous consent.

**RAYMOND M. ATKINS MD**
**Secretary**

## Second Meeting, April 29, 1988 (324th Meeting)
## Minutes, House of Delegates

The 324th meeting, second of the 190th Annual Session of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 2:05 p.m., the President, Leon E. Kassel MD, and the Secretary, Raymond M. Atkins MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council Member:

**ALLEGANY COUNTY**
Wayne C. Spiggle

**ANNE ARUNDEL COUNTY**
Leoncio A. Ceccarelli
Thomas C. Cullis

**BALTIMORE CITY**
* Annie M. Bestebreurtje
Gaylord L. Clark, Jr.
Frank A. Giargiana
* Willarda V. Edwards
* Albert Folgueras
* John H. Hirschfeld
James M. Hitzrot, II
* Joseph H. Hooper
Thomas E. Hunt
Murray A. Kalish
Donald W. Mintzer
* Albert Nahum
Samuel I. O'Mansky
* Rosemary Olivo
William F. Renner
* Gerhard Schmeisser, Jr.
Edward L. Suarez-Murias
J. Andrew Sumner
* Alan J. Sweatman
* Richard B. Williams

**BALTIMORE COUNTY**
Thomas E. Allen
Marianne Benkert
* Albert L. Blumberg
Harold Bob
Louis C. Breschi
A. Hamid Ghiladi
Bernard S. Kleiman
Paul G. Koukoulas
John M. Krager
N. Edward Nachlas, Sr.
Allen G. Scott
Margaret L. Sherrard
H. Margret Zassenhaus

**CAROLINE COUNTY**
Robert H. Wright

**CARROLL COUNTY**
Alva S. Baker(C)

**CHARLES COUNTY**
Daniel M. Howell
Guillero E. Sanchez

**DORCHESTER COUNTY**
Paul A. Stagg

**GARRETT COUNTY**
Herbert H. Leighton(C)

**HARFORD COUNTY**
Ben E. Oteyza

**KENT COUNTY**
Harry P. Ross

**MONTGOMERY COUNTY**
Charles H. Ligon
Francis C. Mayle, Jr.
* Peter B. Sherer
Margaret T. Snow

**PRINCE GEORGE'S COUNTY**
Stanley A. Forster
John E. Jeffrey
Zorayda M. Lee-Llacer
David Robb
Elliece S. Smith
Frederick Wilhelm

**QUEEN ANNE'S COUNTY**
John R. Smith, Jr.(C)

**ST. MARY'S COUNTY**
J. Roy Guyther

**WASHINGTON COUNTY**
Max E. Byrkit
Edward Ditto, III

**WICOMICO COUNTY**
Alex Azar

**COUNCIL**
Albert M. Antlitz
Raymond M. Atkins
James E. Bell
Paul Bormel
Ira N. Brecher
Benjamin Del Carmen
Donald H. Dembo
Michael R. Dobridge
Joseph S. Fastow
Vincent D. Fitzpatrick
John H. Hebb
Lawrence A. Jones
Leon E. Kassel
Henry P. Laughlin
Reynaldo Lee-Llacer
Leon R. Levitsky
Donald T. Lewers
George S. Malouf
Leslie R. Miles, Jr.
J. David Nagel
Hiroshi Nakazawa
David S. O'Brien
Benjamin S. Pecson
Gary L. Rosenberg
Marvin Schneider
Aubrey C. Smoot
Roland T. Smoot
Joseph Snyder
Donald W. Wiczer

**BOARD OF MEDICAL EXAMINERS**
Arthur T. Keefe, Jr

Also present were staff personnel.

### Guests

The President read the names of the following invited guests

Glenn B. Updike, Jr., MD, President
Medical Society of Virginia
David M. Seitzman, MD, President-Elect
Medical Society of DC
Cordell DeLaPena, MD, President
West Virginia State Medical Association
Martin J. Cosgrove, MD, President
Delaware Medical Society
Donald E. Harrop, MD, President
Pennsylvania Medical Society

### Faculty Elections

There having been no nominations from the floor and there being only one candidate for each office to be filled, by unanimous consent, the ballot was dispensed with and the following were elected by voice vote:

President-elect
Raymond M. Atkins, Baltimore, Baltimore City
(President-elect 1988-1989) (President, 1989-90)
First Vice President
Marvin Schneider, Wheaton,
Montgomery County (1989)
Second Vice-President
Bahram Erfan, Riverdale,
Prince George's County (1989)
Third Vice-President
Alex Azar, Salisbury, Wicomico County (1989)
Secretary
Harold B. Bob, Baltimore, Baltimore County (1989)
Treasurer
Jose M. Yosuico, Baltimore, Baltimore City (1989)
Committee on Scientific Activity
(6 year term - 1989-1995)
Benjamin V. Del Carmen, Baltimore,
Baltimore County
Finney Fund Committee (5 year term - 1989-1994)
Edmind G. Beacham, Baltimore, Baltimore City
Delegates to the AMA
John H.Hebb, Baltimore, Baltimore County
(January 1, 1989-December 31, 1991)
Michael R. Dobridge, Silver Spring,
Montgomery County
(January 1, 1989-December 31, 1991)
Alternate Delegates to the AMA
Joseph Snyder, Silver Spring, Montgomery County
(January 1, 1989 - December 31, 1991)
Alex Azar, Salisbury, Wicomico County
(January 1, 1989 - December 31, 1991)

By unanimous consent, nominations were re-opened to fill the Dr. Raymond M. Atkins, to the post of President-elect. Dr. Harold B. Bob was nominated from the floor and was elected by unanimous voice vote.

### MMPAC Report

J. Andrew Sumner MD, Chairman of the Maryland Medical Political Action Committee made a report to the House of Delegates, which will be published in the annual reports.

### Auxiliary Report

Mrs. Ching Barretto, Auxiliary President, made a report to the House of Delegates which will be published in the annual reports. Upon conclusion of the report, Mrs. Barretto received a standing ovation from the Delegates of the House.

### Announcements

The President announced that a dedication ceremony would be held at the Med-Chi Building on Saturday, September 24th in celebration of the newly renovated Krause Reading Room of the Faculty Library. He also advised the Councilors of a meeting of the new Council which would convene immediately at the adjournment ofthe House.

### Oath of Office

Dr. Kassel, President, briefly addressed the House, administered the oath of office to Dr. Michael R. Dobridge, the incoming President, and the exchange of the gavel took place. Dr. Dobridge then presented the Past-President's Medallion to Dr. Kassel and proceeded to briefly addressed the House.

By unanimous consent, the President declared the meeting adjourned sine die at 2:25 p.m.

RAYMOND M. ATKINS MD
Secretary

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## Annual Reports of Committees

### AIDS

*Mr. President and Members of the House of Delegates:*

Formerly the Ad Hoc Policy Advisory Committee on AIDS, this is now a full-standing committee of Med-Chi. This commitment indicates the medical society's interest in the study of and providing of information on AIDS.

Over the last 12 months, a number of AIDS issues have surfaced, and while the major focus of this committee is to educate physicians, we often are called on to educate individuals in other walks of life.

AIDS can be controlled only through education and prevention. One task has been to reach and educate the children about this fatal disease. While there continues to be resistance in several areas of the state, we believe we have been instrumental in encouraging the education of our children. We provided impetus for enabling the Maryland State Board of Education to change their regulations so that meaningful education could be provided for younger students.

Meetings have been held with the chairman and members of the Faculty's Ethics Committee to assist in providing ethical opinions for physicians in the treatment of AIDS patients. Our position is identical to that of the AMA.

A great deal of legislation related to AIDS issues was introduced during the 1988 General Assembly. Opinions of the Committee were rendered and transmitted to the Faculty's Legislative Committee and the Governor's Advisory Council on AIDS. Members of this committee also testified in Annapolis when needed.

The Committee cosponsored a scientific session at the 1988 Annual Meeting of Med-Chi entitled "AIDS: Perinatal and Adolescent," and the response was overwhelming. The Committee also sponsored an educational booth on AIDS and distributed pamphlets provided by the Department of Health and Mental Hygiene. Committee members volunteered their time to staff the booth and to respond to questions raised by the physicians. Throughout the year, Committee members volunteered as speakers for communities, schools, and professional groups.

Membership on this Committee consists of physician-members of Med-Chi and representatives from local and state health departments, the Health Education Resource Organization (HERO), and the Center for Health Education. The Committee looks forward to the coming year and will strive to provide appropriate education to the physicians and the public. The Chairman is appreciative of the devotion of the committee members and of the Faculty staff.

**J.D. DRINKARD MD, Chairman**
**ROBERT ANCONA MD**
**FORD BREWER MD**
**EMMANUEL FRANCOIS MD**
**EDWARD HOPF MD**
**MICHAEL L. LEVIN MD**
**HELEN B. McALLISTER MD**
**DONALD M. PACHUTA MD**
**STANLEY ROSEN MD**
**MARGARET SHERRARD MD**
**MARGARET SNOW MD**

**Advisory Members**
**BERNARD BRANSON MD**
**DIANE DWYER MD**
**ERIC M. FINE MD**
**JOYCE HARPER MD**
**CARMINE VALENTE PhD**

### Alcoholism and Chemical Dependency

*Mr. President and Members of the House of Delegates:*

The tenth year of the Committee on Alcoholism and Chemical Dependency was a year of transition and reorganization. In August 1987, four subcommittees were established to address the various issues surrounding alcohol and chemical dependency: National Conference Subcommittee, Legislative Subcommittee, Medical Student/Resident Training Subcommittee, and Maryland Chemical Abuse Subcommittee.

The goal of the Regional Conference Subcommittee was to establish either an annual conference on clinical issues concerning chemical abuse for primary care physicians and/or to establish miniconferences for local groups of physicians. The Subcommittee decided it was more feasible to design a half-day conference for smaller groups of physicians. To that end, the first such conference was held in Elkton, Maryland on June 3, 1988, at Union Hospital. Following this conference, the Subcommittee refined its goals in order to develop an effective and dynamic seminar that can be transported around the state to various physician groups. Dr. Gagliardi chairs this subcommittee.

The Legislative Subcommittee, under the leadership of Robert Kent MD, was very effective in reviewing state and national legislation affecting policies of drug and alcohol abuse treatment. As a result, several recommendations were made to the Med-Chi Legislative Committee.

The Medical Student/Resident Training Subcommittee, chaired by John Steinberg MD, is addressing the current educational efforts by medical school and residency programs concerning alcohol and chemical abuse training. This subcommittee has the complex task of not only evaluating current efforts but also of ultimately producing a position paper on the current state of alcoholism and chemical abuse education along with recommendations for future efforts to train medical students and residents in the clinical aspects of alcoholism and chemical abuse.

The Subcommittee to Formulate a Maryland Chemical Abuse Council, chaired by Robert White, was charged with evaluating the feasibility of establishing a statewide council on alcoholism and chemical abuse. This new council would not accept funding from the alcohol beverage industry and would be either independent or affiliated with the National Council on Alcoholism (NCA); its mission was to address the fact that in Maryland there was no council unencumbered by monies from the alcohol beverage industry. Such a council is crucial to educating the public about the issues of alcoholism and chemical abuse. This Subcommittee completed its task, and an independent task force has been developed to estabish a statewide council.

The Committee also proposed two Resolutions to Med-Chi. The first Resolution was to support the AMA Resolution 136 requesting that pharmacies not sell tobacco products. The second Resolution, recently passed by Med-Chi's House of Delegates, called for a total ban of smoking in the public and parochial school systems of Maryland.

In addition to these two Resolutions, the Committee investigated the Spuds MacKenzie advertising campaign and concluded that Spuds MacKenzie, through a wide range of toys and games, is subtly targeting young people. This association between Spuds, alcohol use, and young people is unethical, and this Committee decided to petition Med-Chi to take a stand against the Spuds MacKenzie advertisements.

Much work remains to be done by this Committee. The issues are complex and the solutions not easily forthcoming. However, the Committee will continue to work diligently to address a wide range of concerns about alcohol and chemical abuse.

As Chairman, I have written to each county medical society requesting permission to visit and discuss the services our Committee provides and to lecture about the various issues of alcoholism and chemical abuse.

I wish to thank the Faculty, the Committee members, and our staff for their assistance and support during the past year.


N. JOSEPH GAGLIARDI MD, Chairman
CONRAD B. ACTON MD
FREDERICK P. ALPERN MD
RICHARD ANDERSON MD
BETH L. ARONSON MD
FEDERICO G. ARTHES MD
MICHAEL R. BOWEN
CLAUDE R. FEINSTEIN MD
W. RICHARD FERGUSON MD
PAUL F. GUERIN MD
JOHN H. HIRSCHFELD MD
ROBERT R. KENT MD
EDWARD J. KITLOWSKI MD
HARRY F. KLINEFELTER MD
SIDNEY J. MALAWER MD
JOHN N. MARGOLIS MD
NORMAN A. POULSEN MD
BRUCE T. TAYLOR MD
JACOB TENDLER MD
ABRAHAM M. SCHNEIDMUHL MD
JOHN R. STEINBERG MD
MAXWELL N. WEISMAN MD

Advisory Members

RONALD N. FLAMER
ISADORE KAPLAN MD
ARTHUR MacEILL HORTON, Jr., EdD
LUDWIG L. LANKFORD
REVEREND WILLIAM LOWRY
MARIE MacCARTHY RN
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PHILIP P. NOLAN DDS
WALTER P. PIDGEON, Jr., CAE
REVEREND MICHAEL G. ROKOS
EMMA J. STOKES PhD


## Medicolegal Hotline For Any Emergency

| | | |
|---|---|---|
| August | George Linhardt MD | 301-268-3005 |
| | Jeanette A. Plante Esq. | 301-752-1630 |
| September | Neil Novin MD | 301-825-5200 |
| | Victoria E. Selph Esq. | 301-868-8950 |

## AMA-ERF

*Mr. President and Members of the House of Delegates:*

The American Medical Association Education and Research Foundation checks were presented to the medical schools of Maryland during Med-Chi's Annual Meeting. Each school received two checks this year: one of non-restricted funds intended for the pursuit of excellence in a medical school's program; and the second of restricted funds to be used for a school's program of financial assistance. The dean of each school will decide on the precise application of the funds. Contributions to the AMA-ERF funds in 1987 totaled more than $2 million, and virtually all of these gifts came from the medical family and were recruited by the American Medical Association Auxiliary.

Mrs. Elizabeth Linhardt, Chairperson of the AMA-ERF, and Mrs. Ching Baretto, President of the Med-Chi Auxiliary, presented checks to The Johns Hopkins University School of Medicine (accepted by Simeon Margolis MD, Associate Dean for Academic Affairs), $15,634 of unrestricted funds to the Medical School Excellence Fund and $2,862 of restricted funds for medical school assistance; the Uniformed Services University of the Health Sciences - for the Henry M. Jackson Foundation (accepted by Jay P. Sanford MD, President), $2,658 of unrestricted funds and $323 of restricted funds; the University of Maryland School of Medicine (accepted by John M. Dennis MD, Dean), $23,844 of unrestricted funds and $5,206 of restricted funds.

**Faculty Contributions**
**June 1, 1987 - May 31, 1988**

| | |
|---|---|
| Allegany County | $ 515 |
| Anne Arundel County | 1,980 |
| Baltimore City | 5,250 |
| Baltimore County | 3,395 |
| Calvert County | 190 |
| Caroline County | ---- |
| Carroll County | 335 |
| Cecil County | 220 |
| Charles County | 215 |
| Dorchester County | 80 |
| Frederick County | 355 |
| Garrett County | 120 |
| Harford County | 780 |
| Howard County | 895 |
| Kent County | 100 |
| Montgomery County | 5,395 |
| Prince George's County | 2,800 |
| Queen Anne's County | 60 |
| St. Mary's County | 60 |
| Somerset County | --- |
| Talbot County | 710 |
| Washington County | 840 |
| Wicomico County | 1,010 |
| Worcester County | 40 |
| **Total:** | $ 25,365 |

**Maryland Physicians' Direct Contributions**

June 1, 1987 through May 31, 1988 $6,599

**Distribution of AMA-ERF Fund to Maryland Medical Schools**

| | Student Assitance | Medical Schools |
|---|---|---|
| University of Maryland School of Medicine | $5,206 | $23,844 |
| Johns Hopkins University School of Medicine | 2,862 | 15,634 |
| Uniformed Services University School of Medicine | 323 | 2,658 |

**ELIZABETH A. LINHARDT**
**State Chairman AMA-ERF**
**1987-1988**

## Auxiliary

*Mr. President and Members of the House of Delegates:*

I am here to report to you that your auxiliary is alive and well! The relationship between the medical society and the auxiliary continues to grow as we realize the importance of team effort; the medical society and the auxiliary working together for common goals. Some of our accomplishments for the year include:

Grand prize for best exhibit for medical heritage at the last Southern Medical Association Convention in San Antonio, TX. The exhibit featuring the life of Dr. John Archer, first medical school graduate, and one of the founders of Med-Chi, was entered by Harford County Auxiliary. First prize in the Doctor's Day category was won by Washington County Auxiliary.

A state Health Careers Day was held at Essex Community College with over 250 high school juniors and seniors from around Maryland participating.

A successful legislative day in Annapolis included a lecture, tour, lunch with legislators, visits with respective legislators and observing hearings. The day gave our members a small insight on the workings in Annapolis.

With the auxiliaries of Virginia, West Virginia and Washington, DC, we organized a two-day meeting on AIDS held in Manassas, VA. One of our speakers, Dr. Margaret Snow, a member of the Med-Chi AIDS Committee, gave us an overview of the disease.

Our component auxiliaries continue to do good work in their communities from co-hosting a bicentennial health fair, assisting in the Red Cross blood drive, overseeing a senior citizen center, setting up health-related programs for senior citizens, organizing a holiday sharing for the poor, helping to raise funds for shelters for homeless, donating baby furniture and equipment to Social Services, giving away car seats, supporting a battered spouse shelter, adopting needy families during special holidays, donating toys to a pediatric unit of a hospital, presenting schools with handmade dolls

with removable body parts (to be used in the classrooms to help kids to respect their bodies and practice good health habits), organizing a Health Yourself Fun Fair attended by over 400 children ages 3-12, collecting gifts for a developmental center, donating money to hospice program, bringing valentine cheer to residents of a nursing home, working with Parents Anonymous, volunteering for prison health fair, S.T.O.P. Program, assisting in flu and prenatal clinics, and organizing an elder love program (a support group for care givers to the elderly). All of these were an effort not only to enhance the image of the physician in the community but also to promote better health care.

We were more than glad to help you in your legislative efforts by calling, writing, and making direct contacts with legislators. I am sure you know that whenever you need the auxiliary's help all you need to do is ask.

This June was very special for the auxiliary because Mary Strauss of Hagerstown was installed as AMA Auxiliary President at the National Convention in Chicago, the very first from Maryland! We planned a Black and Gold Reception in her honor at the Drake Hotel and also a Maryland Family Dinner for all physician and auxiliary delegates, families and friends who attended the convention.

Membership continues to be a challenge. Each president has approached this challenge with new ideas and renewed enthusiasm, and I was no different. Most of our counties are on dual billing. The auxiliary recruits, but it is you, our spouses, who pay our dues with yours. I am curious as to how many of your spouses belong to the auxiliary. You know our dues are only the cost of a pair of shoes, dinner out, or a theater ticket. I assure you it will be money well spent. The Auxiliary has many worthwhile programs that interest a diverse group.

I have enjoyed being an observer in your meetings and updating you on auxiliary happenings. Because we are the organization that works side by side with you and because we can truly meet the changes and challenges you face today, let us continue to join together and face a bright and promising future for the medical society and the auxiliary.

**CHING BARRETTO, President**
**1987-1988**

## Bylaws

*Mr. President and Members of the House of Delegates:*

The Bylaws Committee recommends the following bylaw amendments to the House of Delegates for its consideration:

1. Proposed Bylaw Amendments to Reflect Appointment of Committee Chairmen and Committee Members by the President

- Rationale: To provide uniformity among the committeey empowering the President to appoint the chairmen and members of Med-Chi committees with the following exceptions: the Nominating Committee, which will retain the Immediate Past President as Chairman; Committee on Scientific Activity on which the elected member whose term next expires becomes Chairman; and the Policy and Planning Committee on which the Council Chairman serves as Chairman.
- Amend Article XI, Section 4 (Computers in Medicine Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 8 (Committee on Drugs), following the words "Its chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 13 (Finney Fund Committee), by striking out the sentence "It shall elect its own chairman." and inserting the words "The President shall designate the chairman."
- Amend Article XI, Section 16 (Liaison Committee with Third Party Carriers), in the first sentence following the word "President" by adding the words "who shall designate the Chairman."
- Amend Article XI, Section 18 (Liaison Committee with Department of Health and Mental Hygiene), in the first sentence following the word "President" by adding the words "who shall designate the Chairman."
- Amend Article XI, Section 22 (Medicolegal Committee), following the words "Its Chairman" and before the word "shall be appointed" by inserting the words "and members" and by striking out the words "and said Chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 24 (Occupational Health Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."
- Amend Article XI, Section 26 (Committee on Physical Assistants), in the first sentence following the word "President" by adding the words "who shall designate the Chairman" and by striking out the second sentence, "It shall elect its own chairman."
- Amend Article XI, Section 28 (Physician Rehabilitation Committee), in the first sentence following the word "President" by adding the words "who shall appoint the following members:" and by striking out the words "and the following members appointed by the Chairman with the approval of the President:"
- Amend Article XI, Section 30 (Preventive Medicine and Public Health Committee), following the words "Its Chairman" and before the words "shall be ap-

pointed" by inserting the words "and members" and by striking out the words "with the members of the committee appointed by the Chairman with the approval of the President."

- Amend Article XI, Section 33 (Public Relations Committee), following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and by striking out the words "and said Chairman shall appoint the other members of the committee with the approval of the President."

The Bylaws Committee recommends adoption of the foregoing amendments.

2. Proposed Bylaw Amendment to Change the Language of the Committee on Continuing Medical Education Review

- Rationale: To more clearly define the responsibilities of the committee and to reflect the appointment of the members by the President.
- Amend Article XI, Section 5, in the first sentence following the words "advise upon" by striking the word "all" and inserting the word "continuing" and after the words "education matters" by striking the words "with emphasis on post graduate educational offerings"; in the second sentence, following the word "survey" by striking the word "specified" and inserting the words "and accredit qualified"; and in the last sentence following the words "The Chairman" by inserting the words "and members" and by striking out the words "with members of the committee appointed by the Chairman with the approval of the President."

**OLD**

[ ] indicates deletion

Section 5. A COMMITTEE ON CONTINUING MEDICAL EDUCATION REVIEW of at least eight members shall consider and advise upon [all] medical education matters, [with emphasis on post graduate educational offerings]. Through authority delegated to the committee from the Accreditation Council for Medical Education, it shall survey [specified] institutions requesting authority to sponsor their own continuing medical education programs. Activities of this committee shall not conflict in any way with activities authorized by these bylaws to other committees of the Faculty. The Chairman of this committee shall be appointed by the President [with members of the committee appointed by the Chairman with the approval of the President].

**NEW**

CAPS indicate change

Section 5. A COMMITTEE ON CONTINUING MEDICAL EDUCATION REVIEW of at least eight members shall consider and advise upon CONTINUING medical education matters. Through authority delegated to the committee from the Accreditation Council for Continuing Medical Education, it shall survey AND ACCREDIT QUALIFIED institutions requesting authority to sponsor their own continuing medical education programs. Activities of this committee shall not conflict in any way with activities authorized by these bylaws to other committees of the Faculty. The Chairman AND MEMBERS of this committee shall be appointed by the President.

The Bylaws Committee recommends adoption of the above amendment.

3. Proposed Bylaw Amendment to Substitute the Cost Effective Committee with the Small Area Practice variation Committee

- Rationale: Substitution required to better reflect the present function of the committee which is concentrated in the analysis of small area medical practice variation.
- Amend Article XI, Section 6, Committee on Cost Effective Medical Care, by substituting for it the following new section:
  Section 6. A COMMITTEE ON SMALL AREA PRACTICE VARIATION consisting of at least five members appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience and interest in small area analysis and medical practice variation. The committee shall act as an analytical group to review studies conducted by outside organizations and shall be authorized to conduct independent studies upon approval by the Executive Committee.

**OLD**

[ ] indicates deletion

Section 6. A COMMITTEE ON COST EFFECTIVE MEDICAL CARE of at least five members shall be appointed annually. It shall disseminate information on cost-containment and work toward the advancement of cost effective quality medical care. Its chairman shall be appointed by the President and said chairman shall appoint the other members of the committee with the approval of the President.]

**NEW**

Rewritten in its entirety.

The Bylaws Committee recommends adoption of the foregoing amendment.

4. Proposed Bylaw Amendment to Change the Language of the Committee on Emergency Medical Services

- Rationale: To incorporate appropriate language to ensure that Med-Chi members who are interested in emergency medicine are appointed to the committee.
- Amend Article XI (Committees), Section 10, in the first sentence following the words "composed of those" and before the word "physician" by inserting the words "interested members as well as"; and following the words "representatives of" by striking out the words "all hospitals" and inserting the words

"each hospital"; and following the word "activity" by striking out the word "shall" and inserting the word "may"; and in the third sentence following the word "public" by striking out the word "shall" and inserting the word "may."

**OLD**
[ ] indicates deletion

Section 10. A COMMITTEE ON EMERGENCY MEDICAL SERVICES composed of those physician representatives of [all hospitals] in Maryland desiring to participate in this activity [shall] be appointed by the President who shall also designate the Chairman. This committee shall develop action programs in emergency medical services to meet the state's needs and maintain liaison groups at all levels concerned with such services. It shall strive for continued improvement in the emergency care provided members of the public; [shall] develop and present educational programs in this regard; and shall make recommendations in cooperation with other concerned groups and individuals for remedial actions where deemed necessary. It shall also attempt to coordinate, wherever possible, similar activities being carried out by like committees of other organizations.

**NEW**
CAPS indicate change

Section 10. A COMMITTEE ON EMERGENCY MEDICAL SERVICES composed of those INTERESTED MEMBERS AS WELL AS physician representatives of EACH HOSPITAL in Maryland desiring to participate in this activity MAY be appointed by the President who shall also designate the Chairman. This committee shall develop action programs in emergency medical services to meet the state's needs and maintain liaison with groups at all levels concerned with such services. It shall strive for continued improvement in the emergency care provided members of the public; MAY develop and present educational programs in this regard; and shall make recommendations in cooperation with other concerned groups and individuals for remedial actions where deemed necessary. It shall also attempt to coordinate, wherever possible, similar activities being carried out by like committees of other organizations.

The Bylaw Committee recommends adoption of the above amendment.

5. Proposed Bylaw Amendment to Change the Name and Language of the Committee on Emotional Health

- Rationale: To more appropriately describe the activities of the Committee and to include a change to reflect appointment of the members by the President.
- Amend Article XI (Committees), Section 11, in the first sentence following the words "COMMITTEE ON" and before the word "HEALTH" by striking out the word "EMOTIONAL" and inserting the word "MENTAL," and in the last sentence following the words "Its Chairman" and before the words "shall be appointed" by inserting the words "and members" and striking out the words "and said chairman shall appoint the other members of the committee with the approval of the President."

**OLD**
[ ] indicate deletion

Section 11. A COMMITTEE ON [EMOTIONAL] HEALTH of at least five members shall investigate, consider, and advise upon all areas of emotional liaison and mental health and maintain close liaison with the areas of mental retardation and alcoholism. Its Chairman shall be appointed by the President [and said chairman shall appoint the other members of the committee with the approval of the President.]

**NEW**
CAPS indicate change

Section 11. A Committee on MENTAL Health of at least five members shall investigate, consider, and advise upon all areas of emotional and mental health and maintain close liaison with the areas of mental retardation and alcoholism. Its Chairman AND MEMBERS shall be appointed by the President.

6. Proposed Bylaw Amendment to Dissolve the Committee on Health Manpower and Planning

- Rationale: The committee's activities are no longer necessary. Due to Reagan's federal policies, most HSAs have been dissolved. Faculty staff can monitor any such activities.
- Amend Article XI (Committees), Section 14, by striking out this section in its entirety as follows (subsequent sections being automatically redesignated):

Section 14. A COMMITTEE ON HEALTH MANPOWER AND PLANNING of at least nine members shall be appointed annually by the President. The committee shall have as its duty the monitoring of developments in health planning at local, state, and national levels; the dissemination of such information as it obtains to the House of Delegates, appropriate Faculty committees, component societies, and individual members of the Faculty; the monitoring primarily of the distribution of physicians in the state by county, specialty, and other suitable breakdowns through the collection and analysis of all available data on physician manpower as well as public needs; and involve itself generally in analysis of the socioeconomic issues and other pertinent areas of interest. The committee may recommend action to the Faculty's governing bodies, appropriate Faculty committees, and component societies. The President shall designate the Chairman of the committee annually.

The Bylaws Committee recommends adoption of the above amendment.

7. Proposed Bylaw Amendment to change the Language of the Committee on Long Term Care and Geriatrics

- Rationale: Change required to reflect the appointment of the Chairman by the President and to include the expanded activities of the committee in the areas of geriatric rehabilitation facilities and home health care services.
- Amend Article XI (Committees), Section 19, in the first sentence following the word "President" and before the word "each" by inserting the words "who shall designate the Chairman."; in the second sentence following the words "geriatrics facilities" and before the word "development" by inserting the words "geriatric rehabilitation facilities, and home health care services," and following the words "in such facilities" and before the words "the goals" by striking out the words "provide for means of review that" and inserting the words "and by outpatient and home health care service providers; serve in an advisory capacity to ensure that."

The Bylaws Committee recommends adoption of the above amendment.

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Section 19. A COMMITTEE ON LONG-TERM CARE AND GERIATRICS, consisting of not less than six members shall be appointed by the president each year. Its duties and responsibilities shall include but not be limited to the evaluation of health care rendered in long-term care and geriatrics facilities, development of fundamental principles involved in seeing that quality health services are provided in such facilities; [provide for means of review that] the goals established by the committee are being met in all such facilities; work with those governmental and other agencies which are involved in the provision and delivery of long-term care and geriatrics services; develop and seek funding for any research projects that might improve the quality of such long-term care and geriatrics services; develop interaction of the various professional and nonprofessional groups concerned with long-term care and geriatrics, preparing and presenting educational programs to acquaint the profession, the public, and others with problems relating to services in such institutions and to integrate these services into the total health care system.

**NEW**

CAPS indicate change

Section 19. A COMMITTEE ON LONG-TERM CARE AND GERIATRICS, consisting of not less than six members shall be appointed by the President WHO SHALL APPOINT THE CHAIRMAN each year. Its duties and responsibilities shall include but not be limited to the evaluation of health care and geriatrics facilities, GERIATRIC REHABILITATION FACILITIES, AND HOME HEALTH CARE SERVICES; development of fundamental principles involved in seeing that quality health services are provided in such facilities AND BY OUTPATIENT AND HOME HEALTH CARE SERVICE PROVIDERS; SERVE IN AN ADVISORY CAPACITY TO ENSURE THAT the goals established by the committee are being met in all such facilities; work with those governmental and other agencies which are involved in the provision and delivery of long-term care and geriatrics services; develop interaction of the various professional and nonprofessional groups concerned with long-term care and geriatrics preparing and presenting educational programs to acquaint the profession, the public, and others relating to services in such institutions and to integrate these services into the total health care system.

The Bylaws Committee recommends adoption of the above amendment.

8. Proposed Amendment to Change the Language of the Committee on Medicine and Religion

- Rationale: To increase the membership of the committee, to indicate the appointment of the Chairman by the President, and to expand the committee's activities to explore the moral aspects of medical care.
- Amend Article XI (Committees), Section 21, following the words "less than" by striking out the words "six members" and inserting the words "four or more than eight members," and in the last sentence following the word "it and before the words "shall also endeavor" by inserting the words "shall serve as a moral values committee of the faculty and"

**OLD**

[ ] indicates deletion

Section 21. A COMMITTEE ON MEDICINE AND RELIGION shall be appointed by the President to consist of not less than [six members.] It shall be charged with maintaining liaison and effective lines of communication between physicians and clergymen leading to the most effective care and treatment of the patient and his family. It shall also endeavor to assist medical schools and nursing schools in their educational endeavors, and shall be available to theological seminaries for similar assistance - all within the areas of medicine and religion combined.

**NEW**

CAPS indicate change

Section 21. A COMMITTEE ON MEDICINE AND RELIGION shall be appointed by the President to consist of not less than FOUR OR MORE THAN EIGHT MEMBERS. THE PRESIDENT SHALL DESIGNATE THE CHAIRMAN. It shall be charged with maintaining liaison and effective lines of communication between physicians and clergymen leading to the most effective care and treatment of the patient and his family. It SHALL SERVE AS A MORAL VALUES COMMITTEE OF THE FACULTY AND shall also endeavor to assist medical schools and nursing schools in their educational endeavors, and shall be available to theological seminaries for similar assistance - all within the areas of medicine and religion combined.

The Bylaws Committee recommends adoption of the above amendment.

9. Proposed Amendment to Change the Language of the Peer Review Committee

- Rationale: To reflect the recent changes in the law (SB-560) pertaining to the peer review system.
- Amend Article XI (Committees), Section 25, by substituting for it the following:
  The PEER REVIEW COMMITTEE shall consist of not less than 12 members, with an effort made to represent major specialties. One-third shall be appointed annually for three-year terms by the President. The Chairman shall be designated annually by the President. It shall be the duty of this committee to review the practices of Maryland physicians in institutions, offices, and other locations where medical care is rendered, for the purpose of evaluating the professional, physical, or mental competence of physicians, but only when formal peer review is duly authorized by Faculty bylaws or State law. This review shall include, but not be limited to, the standard of medical care rendered. The committee shall also be charged with review of the care rendered by those persons under the supervision of physicians. All complaints shall be submitted in writing to the committee Chairman prior to initiation of the review process. At the discretion of the committee, a case may be referred to a local peer review committee. Any party aggrieved by the action of a local peer review committee may within 30 days of such action, file an appeal in writing to the Peer Review Committee of the Faculty, which should review the matter on appeal. If a local peer review committee fails to initiate or pursue action with respect to any complaint within 90 days of the referral, the Faculty may take original jurisdiction of the case. This committee's services shall be made available to any responsible complainant. All peer review committee proceedings are confidential within the legal limits.

OLD

Section 25. A PEER REVIEW COMMITTEE consist of not less than nine members, one third of whom shall be appointed annually for three-year terms by the President. It shall be the duty of this committee to review the practices of Maryland physicians practicing in institutions, offices and other locations where medical care is rendered, for the purpose of evaluating the appropriateness of the care rendered as well as the competency and efficiency of the physicians rendering it. This review shall include, but not limited to, the quality of the physical examination given The committee shall also be charged with review of the quality of care rendered by those persons under the supervision of physicians. All complaints, allegations, and/or accusations must be as specific as possible, and submitted to the Committee Chairman, in writing, prior to initiation of a review process. The committee shall stimulate component societies to establish similar Peer Review Committees with the same purposes, but if a component society declines to establish such a committee, or refer cases to an already established committee, the Faculty's Peer Reveiw Committee may assume original jurisdiction of the matter. Any party aggrieved by the action of a local Peer Review Committee may, within 30 days of such action, file an appeal in writing to the Peer Review Committee of the Faculty which shall review the matter on appeal; provided, however, that if a local Peer Review Committee fail to initiate or pursue action with respect to any complaint of an aggrieved party within 90 days of the referral of the matter to it, the Review Committee of the Faculty may take original jurisdiction of the matter. This Committee's services shall be made available to any third party payor on request, or it may institute a review of the physician's medical care delivery based upon information coming to it from any source, such as other Faculty committees, public interest groups, other professional organizations, local, state or federal agencies, or responsible and competent members of the general public. The identity of any patient, or any identifying information, shall be kept confidential by this committee. The Chairman shall be designated annually by the President.

NEW

Rewritten in its entirety.

The Bylaws Committee recommends adoption of the above amendment.

10. Proposed Bylaw Amendment to Establish a Committee on Specialist Identification

- Rationale: To establish the present ad hoc committee as a full standing committee of the Faculty.
- Amend Article XI (Committees) by inserting after Section 35, a new Section 36 (subsequent sections automatically redesignated):
  Section 36. A COMMITTEE ON SPECIALIST IDENTIFICATION of at least nine members shall be appointed annually by the President; one of whom the President shall designate as Chairman. The committee shall review applications received by the Board of Medical Examiners and referred to the Faculty for recommendation on identification of medical specialty.

The Bylaws Committee recommends adoption of the above amendment.

**HAROLD B. BOB MD, Chairman, Baltimore**
**JOHN R. LILLY MD, Hyattsville**
**ALEX AZAR MD, Salisbury**
**LESLIE R. MILES, Jr. MD, Lonaconing**

## Continuing Medical Education Review

*Mr. President and Members of the House of Delegates:*

The Sixth Annual Meeting for CME directors and planners was held during Med-Chi's Annual Meeting. The featured speaker, Dr. Larrie W. Greenberg, from Childrens Hospital, National Medical Center in Washington, D.C., conducted a workshop entitled "Improving the Quality of CME: A Faculty Development Approach." The format of the workshop was excellent and well received by all the participants.

The Committee held six meetings during the past year. Among other activities, the Committee conducted a survey of those Maryland hospitals identified as not currently being accredited by Med-Chi to provide Category I CME offerings. Each of those hospitals were contacted and provided and provided information on how to become accredited. At this time, sixty hospitals and organizations are accredited by Med-Chi.

Action was taken on the following organizations/hospitals that are accredited by Med-Chi to provide intrastate Category I continuing medical education programs:

1. American Cancer Society - Maryland Division
2. American Heart Association - Maryland Affiliate
3. American Lung Association of Maryland
+ 4. Anne Arundel General Hospital
+ 5. Baltimore County General Hospital
6. Bon Secours Hospital
7. Carroll County General Hospital
8. Center for Health Education, Inc.
9. Chestnut Lodge
10. Children's Hospital, Inc.
11. Church Hospital
12. Community Psychiatric Clinic, Inc.
13. Crownsville Hospital Center
14. AMI Doctors' Hospital of Prince George's Hospital
15. Dorchester General Hospital
+ 16. Fallston General Hospital
17. Franklin Square Hospital
+ 18. Frederick Memorial Hospital
19. Good Samaritan Hospital
20. Greater Baltimore Medical Center
21. Greater Laurel Beltsville Hospital
+ 22. Harford Memorial Hospital
+ 23. Holy Cross Hospital
24. Howard County General Hospital, Inc.
+ 25. Kernan Hospital
26. Levindale Hebrew Geriatric Center and Hospital, Inc.
27. Liberty Medical Center
28. Maryland General Hospital
29. Maryland Hospital Education Institute
30. Maryland Psychiatric Society
+ 31. Maryland Radiological Society
32. Memorial Hospital (Cumberland)
33. Memorial Hospital (Easton)
34. Mercy Hospital
+ 35. Montgomery County Medical Society
36. Montgomery General Hospital
37. Montgomery Village Seminars
38. The Neurology Center, P.A.
39. North Arundel Hospital
40. The North Charles Hospital
41. Peninsula General Hospital
42. Prince George's County Medical Society
+ 43. Prince George's Hospital Center
44. Sacred Heart Hospital
45. St. Agnes Hospital
46. St. Joseph Hospital
47. Shady Grove Adventist Hospital
+ 48. Sheppard & Enoch Pratt Hospital
49. Sinai Hospital
50. South Baltimore General Hospital
51. Southern Maryland Hospital, Inc.
52. Spring Grove Hospital
53. Springfield Hospital Center
54. Suburban Hospital
55. Taylor Manor Hospital
56. Union Memorial Hospital
57. University Health Center, University of Maryland
58. Veterans Administration Hospital/Perry Point
+ 59. Washington Adventist Hospital
60. Washington County Hospital

+/- indicates accreditation was renewed during 1987-1988

Those hospitals/organizations having no marking were granted accreditation in previous years.

**EUGENE P. LIBRE MD, Chairman**
**JAMES CASTELLANO MD**
**RICHARD F. CIOFFI MD**
**IRVIN H. COHEN MD**
**LAWRENCE F. COHEN MD**
**WORTH B. DANIELS MD**
**JOHN M. DENNIS MD**
**HOWARD D. GOLDSTEIN MD**
**KEVIN N. HENNESSEY MD**
**CHARLES F. HOBELMANN MD**
**JOHN C. HYLE MD**
**HENRY H. KWAH MD**
**SIMEON MARGOLIS MD**
**GORDON W. MELLA MD**
**ALBERT I. MENDELOFF MD**
**ABDUL NAYEEM MD**
**R. KENNEDY SKIPTON MD**
**EDWIN H. STEWART MD**
**BERNARD TABATZNIK MD**
**WILLIAM L. THOMAS MD**
**JOHN W. BULLARD PhD (Advisory)**
**JACK L. MASON PhD (Advisory)**

## Delegates to the AMA House of Delegates

*Mr. President and Members of the House of Delegates:*

Your delegation attended the annual session of the AMA House of Delegates from December 6-9, 1987 in Atlanta, Georgia and reports the following summary of the major issues considered at the meeting.

**The AIDS Epidemic** The House filed an important report of the Council on Ethical and Judicial Affairs providing ethical guidelines to physicians on three significant issues related to the AIDS epidemic:

1. A physician may not ethically refuse to treat a patient solely because the patient is seropositive.

2. Where there is no statute that mandates or prohibits the reporting of seropositive individuals to public health authorities and a physician knows that a seropositive patient is endangering a third party, the physician should:

   a. attempt to persuade the infected patient to cease;
   b. if persuasion fails, notify the authorities;
   c. if the authorities take no action, notify the endangered third party.

3. A physician who knows that he or she has an infectious disease should not engage in any activity that creates a risk of transmission of the disease to others.

*AMA Activities Related to AIDS* The House adopted a Board report that describes a full range of Association activities in response to the growing AIDS crisis, including

- Publication and distribution of 11 informational reports on AIDS to 370,000 physicians.
- Regional AIDS health education programs were conducted in Pennsylvania, Texas, California, and Illinois.
- A national conference on "AIDS and Public Policy: A Community Response" was held in April 1987 with 800 attendees.
- Another national conference planned for March 1988 and a video clinic on "AIDS in the Workplace" is under development.
- Through the judicial process the AMA has continued to exercise leadership in protecting patients with AIDS from unreasoned discrimination based on their handicap.
- A number of other educational activities were reported including cooperation with the CDC in the development of informational brochures for the public, public service announcements, and radio programming.

*Problems in AIDS Education* The House approved a report outlining various national efforts in educating the public on the prevention of AIDS. The report claims that efforts in health education and prevention have been inadequate in scope and lack coordination.

The report, submitted by the AMA Council on Scientific Affairs, recommended that the AMA support AIDS education in the United States by

- Encouraging national coordination and tracking of all major AIDS health education and prevention activities.
- Encouraging the federal government through AMA policy statements and recommendations to increase funding for prevention and education significantly in accordance with Public Health Service Projections of the incidence of HIV related disease.
- Encouraging the federal government through AMA policy statements and recommendations to take a stronger leadership role in ensuring interagency cooperation, private sector involvement, and the dispensing of fund based upon real and measurable needs.
- Organizing, in collaboration with other groups, a national conference aimed at developing strategies and recommendations for AIDS education in the United States.
- Developing and facilitating by all methods available to the AMA educational resources and effective delivery programs for specific targeted groups.
- Encouraging physicians to assist parents in providing human sexuality education to children and adolescents.

**Professional Liability** Professional liability continues to be of critical importance to medicine, generating much discussion at the Interim Meeting.

The House adopted a comprehensive report prepared by the AMA's Special Task Force on Professional Liability and Insurance and the AMA's Advisory Panel on Professional Liability. The report

- described recent federal activity in this area
- described recently developed alternatives to the civil justice system
- discussed risk retention groups, procedural based insurance rating plans, and the availability of Directors and
- officers liability insurance.

The House also considered a number of resolutions on this issue and approved

- a resolution calling upon the AMA to compile a report of state tort reforms overturned by the courts in the past 15 years.
- a resolution calling on the AMA to support and commend the efforts of the Florida Medical Association in seeking enactment of an alternative mechanism to the current tort system for resolving medical liability disputes, "Medical Incident Compensation Act" (MICA). The resolution also asked the AMA to carefully evaluate MICA along with other tort reform measures.
- a resolution calling on the AMA to seek the cooperation of state medical associations and consumer groups to procure the enactment of legislation that will limit lawyer's contingent fees to a reasonable percentage of the net recovery.

**Physician Reimbursement Under Medicare** Numerous reports and resolutions addressed the continuing problems

physicians are having with the administration of the Medicare program.

The House considered a comprehensive informational report providing an update on the current status of the Medicare physician payment issue and detailing the intensive AMA activities in this area.

The House also approved a resolution calling on the AMA "to reaffirm to the public the principle that payment schedules adopted by third party payors shall be construed as schedules of benefits to their covered insureds except in cases where physicians have voluntarily contracted with the insurer to accept those benefits as payment in full for services rendered, or as required by law."

**Protection for Medicare Patients of Limited Means** A resolution was adopted that asks the AMA to aid and encourage individual state medical societies to develop voluntary Medicare assignment programs that will assist in the protection of the financial resources of the elderly of limited means and that will ensure access to health care for all of the elderly.

The House also recognized the National Eye Care Project of the American Academy of Ophthalmology as an example for other societies to follow.

In a final word on the subject, the House approved a resolution calling on the AMA Board of Trustees to continue to actively oppose, through appropriate political and legal means, any and all actions by any governmental agency or legislative body requiring mandatory acceptance of Medicare assignment and that all concerned physicians be encouraged to join with the AMA in the active opposition to such oppressive action.

**Maximum Allowable Actual Charge (MAAC)** Inequities in Medicare's maximum allowable actual charge limits stimulated several resolutions and stirred considerable debate among the physicians. The House approved policy to

- seek legislation to eliminate unfair fee distortions created by the current MAAC implementations
- exert every effort to prevent physicians from being penalized, persecuted, or prosecuted for unintentional possible MAAC violations
- relieve physicians of the inequitable MAAC provisions
- eliminate the artificial and misleading categorization of physicians as "participating" or "nonparticipating"
- seek to correct MAAC discrimination against young physicians
- oppose efforts by commercial carriers or the federal government that would require physicians to predict reimbursement for services rendered
- work for repeal of the provision of the Omnibus Budget Reconciliation Act of 1986 regarding notification of patients receiving elective surgery of the physician charge and the amount the patient would be expected to pay when the charge is $500 or more and the claim is not accepted on an assigned basis
- work to repeal provisions that require physicians to refund payments associated with Medicare services that are deemed medically unnecessary by HCFA after the fact
- communicate to the federal government that:
  1. increases in Medicare reimbursement need to be universal.
  2. current reimbursement needs to be adjusted.
  3. discrimination in schedules between participating and nonparticipating physicians should be ended.

**Peer Review Organizations (PROs)** The House considered a status report on current PRO program developments and on the activities of the Ad Hoc Committee on PRO. The House learned that significant progress has been made in working with HCFA, as well as with Congress, on PRO concerns. The House noted the current willingness of federal PRO program officials to listen to the concerns of physicians. The House took a number of actions to seek redress of weaknesses in the PRO program, asking the AMA to

- challenge both the PROs and HCFA publicly and politically, to develop a program that honestly promotes high quality and the delivery of efficient medical care
- take appropriate steps to assure that the PRO statutes as now written and implemented through HCFA guidelines reflect the community standards for high quality care
- call upon Congress and HCFA to assure sufficient funding for programs to inform patients and physicians concerning the actions of PROs
- urge that peer review organization review be extended to all care rendered in government-managed hospitals and systems
- work to eliminate the bounty system in the Office of HHS Inspector General that provides employees with bonuses based on the number of sanctions imposed and penalties recovered
- take appropriate steps to assure that physicians have early input in the PRO complaint process and receive appropriate due process review opportunities prior to any report being sent to the patient regarding the quality of care provided.

**Resident Physician Working Hours** The AMA Council on Medical Education submitted a far-reaching report setting forth 10 guiding principles on issues of resident working hours and supervision. The Council asked the House to

- recognize that problems exist with regard to resident supervision, which may compromise the educational program, the health of residents, and patient care
- urge the ACGME to revise the Essentials of Accredited Residencies in GME to emphasize the importance of resident supervision, work hours, and stress
- urge each Residency Review Committee to revise its Special Requirements to define the supervision and

the maximum work hours to avoid excessive stress and fatigue, to assure quality patient care, and to attain the objectives of the educational program.

**Nursing Education and the Supply of Nursing Personnel in the US** The House adopted a report that concluded a shortage of nurses impacts safe and effective medical services in hospitals and the home. The Board called for incentives that will effectively help recruit, retain, and encourage the continuing formal education of skilled personnel who will work at the bedside in hospitals. The House approved these recommendations to address this growing problem:

1. Support all levels of nursing education, at least until the crisis in the supply of bedside care personnel is resolved.
2. Support government and private initiatives that would facilitate the recruitment and education of nurses to provide care at the bedside.
3. Support economic and professional incentives to attract and retain high quality individuals to provide bedside nursing care.
4. Support hospital-based continuing education programs to promote the education of caregivers who assist in the implementation of medical procedures in critical care units, the operating and emergency rooms, and medical-surgical care.
5. Cooperate with other organizations concerned with acute and chronic care to develop quality educational programs and methods of accreditation of programs to increase the availability of caregivers at the bedside and to meet the medical needs of the public.

**AMA Budget, Fiscal 1988** The House considered the 1988 plan and budget and commended the Board and its Finance Committee and the Executive Vice President for their skillful management of the Association's financial resources The budget includes operating revenues of $165,870,000 and operating expenses of $163,090,000.

**AMA Membership** The House learned that the AMA made record-breaking membership gains in 1987 resulting in an increase in AMA market share.

**Membership Incentive Program** The House adopted a Board Report describing the implementation of a financial incentive program designed to reward state medical societies for achieving AMA membership growth beyond established revenue goals based on each state's own past performance.

**Members Insurance Plan** The House approved a Board of Trustees recommendation to form an in-house, for-profit insurance agency subsidiary to handle the administration, brokerage, and marketing of the AMA's insurance plans. These plans will now be offered to nonmembers. This expansion of the target market is designed to result in augmentation of nondues income and increased profitability to the AMA.

**Resident Physician Involvement in AMA** The House adopted a resolution asking the AMA to determine the number of AMA delegates allocated to each state due to resident physician membership and to encourage equitable resident representation in each state's AMA delegation.

**FMG Participation** The House adopted a resolution asking the AMA to offer encouragement and assistance to state and county medical societies in fostering greater participation of foreign medical graduates in leadership positions at all levels of organized medicine.

**Medical Staff Participation in the Joint Commission Site Surveys** The House voted to have the AMA work with the Joint Commission to assure that appropriate members of the medical staff, along with their designated support personnel, represent the medical staff during the Joint Commission site survey.

**Contractual Relations - Alternative Health Plans** The House called for an AMA study on the implications of hospitals' contractual relationships with alternative heath plans.

**Role of the Hospital Medical Director** A resolution was adopted calling for the development of guidelines for the role of medical director that will maintain the autonomy of the self-governing medical staff and encouragement of a cooperative and effective relationship between the medical staff and the medical director.

**Harvard AMA Relative Value Study** The Board of Trustees submitted a status report on the Harvard/AMA Relative Value Study, a national study of resource based relative value scales for physician services. Several resolutions on the issue also were introduced and referred for action.

One resolution asked the Board to develop criteria by which the Relative Value Study could be evaluated seeking input from the various national specialty organizations.

Also, the resolution asked the Board to develop recommendations for implementation of the RVS, assuming acceptance by the AMA, to include both specific methodology and time to achieve full realignment.

• • •

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process. AMA House meetings provide a unique opportunity, and we encourage you to attend and participate. Any member of the Association may present testimony at the Reference Committee hearings, and corridor discussions on the issues provide additional opportunities to get your views across.

If you cannot attend the meeting you can still be represented through your delegate. Let your delegation know your opinions. You also can prepare a resolution and request it be submitted to the House.

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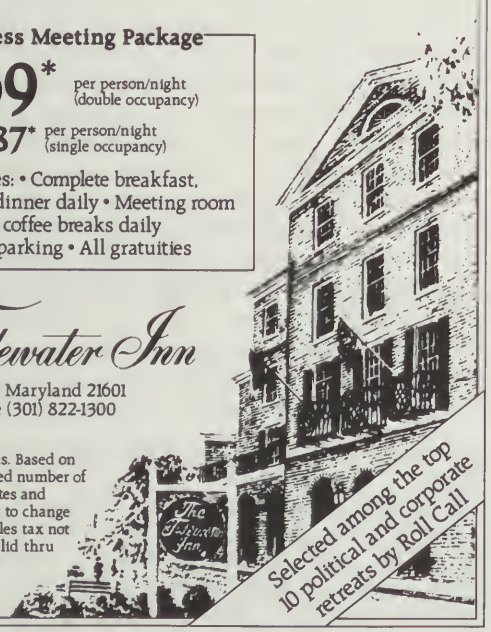
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## Drugs

*Mr. President and Members of the House of Delegates:*

With the increase in public awareness concerning to the physician review process, the Committee on Drugs was faced with a number of challenges over the last year. Since the late '70s, the Chairman of the Committee has been appointed Medical Consultant to the Department of Health and Mental Hygiene. Although the initial intent was for monitoring the prescribing of amphetamines in the State of Maryland, the emphasis of referrals included all types of controlled dangerous substances. Over the years, the Division of Drug Control has submitted the findings of routine pharmacy surveys for evaluation. Many of the questions concerning prescribing had been clarified through an exchange of correspondence between the Committee and the physician involved. The Committee has been an investigative arm of the Commission on Medical Discipline.

With the implementation of Senate Bill 560, the climate of physician review changed. The Committee became even more investigative and involved in the review of physician's prescribing practices. At the beginning of the tenure of this committee one year ago, there were 60 active cases pending. At present, the Committee continues to receive pharmacy surveys from the Division of Drug Control, most of which are forwarded to the Maryland Commission on Medical Discipline for referral in accordance with the Peer Review Management Protocol. The current procedures of the Committee on Drugs are being considered, and appropriate protocols are being developed to expedite referrals.

As our experience has shown, one of the most serious and most often reported problems brought to the attention of this Committee is the prescribing of narcotic analgesics (although there are many significant problems with the prescribing of other controlled dangerous substances such as sedative-hypnotic, tranquilizers, and lesser analgesic drugs). Some physicians continue to prescribe these medications over extended periods. All too frequently, we find this is done without documentation of need or improvement in the patient's condition. Frequently, these drugs are prescribed for people known to be addicted, some of whom are street-addict types and others who appear to be ordinary citizens but who are none the less addicted. This latter practice is in violation of the Annotated Code of Maryland. Committee members believe physicians should review the available literature to update their knowledge of the effects and side effects of analgesics and narcotics as well as their interaction with other drugs (for example, "Will Your Prescribing Habits Cost Your License?" *Maryland Medical Journal*, February 1988).

One area of great concern this past year was the number of reports of physicians administering injectable Demerol and prescribing injectable Methadone. It is imperative that physicians be aware of the legal restrictions on the use of Methadone, either injectable or oral. It is also the opinion of the members of the Committee on Drugs that patients who require recurrent or regular injectable medications are seeking some effect other than pain relief.

It is important that physicians be aware of the dangers of prescribing controlled dangerous substances and that a high level of suspicion be maintained when prescribing these drugs.

Committee members and staff will continue to strive to maintain its balance of educational and disciplinary value to the profession and to the community and will continue to be active in educating physicians who misuse their prescribing privileges.

The Chairman is appreciative of the time, effort, and devotion of the Committee members and staff to this important aspect of physician education.

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## Emergency Medical Services

*Mr. President and Members of the House of Delegates:*

The Emergency Medical Services Committee held five meetings during the past year to discuss issues such as the treatment of hospice patients in the Emergency Department, AIDS, indigent patient care, and problems encountered in the Emergency Department with HMOs.

At the Committee's suggestion, the Executive Committee appointed a Task Force on Emergency Medical Services and Pre-Paid Health Plans to consider problems related to these health plans and emergency departments. The Task Force, which consisted of three EMS physicians and three physicians employed by HMOs, met several times and developed a list of problems and their possible solutions. This report was submitted to the Executive Committee together with other general recommendations.

During the year, the Committee discussed the denial of care to indigent patients. A motion was passed by the Committee and forwarded to the Executive Committee for consideration. It was instrumental in the development of an Emergency Medicine page in the *Maryland Medical Journal.*

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## Emotional Health

*Mr. President and Members of the House of Delegates:*

During 1987-1988, the Committee on Emotional Health met monthly from September through April. These items were discussed and/or acted upon:

The bylaws were reviewed, and the Bylaws Committee of Med-Chi was asked to consider a name change. The Committee members felt that "The Committee on Mental Health" would better identify the Committee and its activities. This issue is still pending.

Under the fine leadership and editorial input of Dr. Lino Covi, "Today's Psychiatry" contained articles submitted by committee members to the *Maryland Medical Journal*. A goal of the Committee has been to improve communication and collaboration between psychiatrists and other physicians in Maryland.

Concerns regarding social workers making medical diagnoses continued to be explored. Communication with the Office of the Attorney General, Department of Social Workers, and Blue Cross and Blue Shield took place throughout the year.

Drs. Gary Nyman, Kenneth Fligsten, and Mark Komrad met with representatives from the Med-Chi Insurance Fund Board of Directors to discuss psychiatric insurance coverage. This issue continues to be researched.

Dr. Henry Harbin was invited to a committee meeting to review the Report of the Commission on the Future of State Psychiatric Hospitals. A letter, initiated by the Committee, was sent to Governor Schaefer, Senator Miller, Delegate R. Clayton Mitchell, and members of the Commission from Med-Chi from Dr. Leon Kassel expressing appreciation for the report and supporting implementation of the Commission's recommendations.

Discussion of interhospital transfer of psychiatric patients took place.

Ms. Peggy Kostritsky, President of the State of Maryland Alliance for the Mentally Ill, presented an overview of the agency's charge as well as pertinent legislative issues. Contact will be maintained with the Alliance in the future.

Richard Anderson, MD, President of the Maryland Psychiatric Association and member of the Med-Chi Physician Rehabilitation Committee, met with the committee members to discuss collaboration on areas of mutual concern. A representative from the Physician Rehabilitation Committee will be asked to serve as liaison to the Committee.

A scientific session, "Update on Diagnosing and Treating Eating Disorders," was held during Med-Chi's Annual Meeting. The presentation, co-sponsored with the Sheppard and Enoch Pratt Hospital, was outstanding and well-attended.

The Committee looks forward to a busy and productive 1988-1989. The Chairman thanks each Committee member for his/her time and effort in working to improve the quality of care for Maryland's citizenry.

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## Executive Director

*Mr. President and Members of the House of Delegates:*

This past year has been one of exceptional growth and evolution for the Faculty. Through the teamwork of many dedicated individuals on staff, we were able to overcome some of the most difficult challenges ever to face organized medicine.

On June 29, 1987, representatives from Med-Chi attended a press conference held by Lt. Governor Melvin Steinberg, Secretary of Licensing and Regulation William A. Fogle, Jr., and Insurance Commissioner Edward Muhl to announce a further reduction in the malpractice insurance rate increase previously announced by Med-Mutual. Through the tireless efforts of Lt. Governor Steinberg, members of his staff, and members of Med-Chi staff, the rate increase, targeted at 32 percent, was reduced to 24 percent.

As a recently elected Board Member of Med-Mutual, I have continued to work throughout the year for a greater level of communication between Med-Mutual and the physicians of Maryland, particularly those in high-risk specialties. In accordance with this, Med-Chi staff mailed malpractice surveys to members of four high-risk specialties (OB/GYN, neurosurgery, orthopedic surgery and emergency medicine) in order to identify the counties in Maryland that would experience heavy losses of practicing physicians if malpractice premiums continue to rise. Staff will continue to evaluate the survey results, looking closely at physician age and practice location.

On September 26, 1987, over 200 members and friends of Med-Chi attended the Dedication Ceremony of the new Faculty Building. The ceremony included remarks from Leon Kassel MD, President of Med-Chi; George Malouf MD, Chairman of the Building Committee; Thomas V. Mike Miller, President of the Senate; and Alan Rifkin, Governor Schaefer's Chief Legislative Officer who delivered a proclamation from the Governor declaring September 26, 1987 as "Med-Chi Day" in Maryland.

The 1988 Maryland General Assembly was a very productive legislative session for the physicians of Maryland, and I personally thank those individual physicians, auxilians, and Med-Chi staff members who assisted in our lobbying efforts by traveling to Annapolis and contacting legislators all over the state. Through their efforts, many necessary modifications in the existing laws were effected, and other proposals designed to deteriorate the quality of health care in Maryland were defeated.

This year brought the passage of a bill that will strengthen Maryland's Peer Review System. The reorganization provides for increased budget and staff while simultaneously preserving the integral role of Med-Chi's Peer Review Committee. The new peer review organization, called the Physicians Quality Assurance Board, will combine the functions of the Commission on Medical Discipline and Board of Medical Examiners. In short, Med-Chi will maintain its role in direct peer review and the resolution of all cases except for those involving moral turpitude. Med-Chi is also responsible for recommending 10 of the 15 members of the new Board.

Mandated Medicare Assignment was defeated once again, however, the issue of a means test among Medicare beneficiaries emerged during this last session as a compromise proposal and received considerable support. We will need to work very hard next year to address such a proposal.

Med-Chi also helped to defeat three bills that would have drastically changed the procedure of assessing Medical Malpractice Liability Insurance policies in Maryland. These bills would have required physicians at the lower range of the malpractice liability rating system to subsidize physicians in the higher categories.

And finally for Maryland, the passage of HB 944, Health Care Malpractice Claims, and SB 481, Loss Reserves Bill, will help to dramatically reduce the Malpractice Insurance Premiums paid by physicians this year.

At the national level, organized medicine scored several significant victories in the Energy and Commerce Committee before Congress recessed in mid-August. The Committee defeated the proposal for Mandatory Assignment for radiologic services, restricted the scope of the radiologic agreement to include only board certified and board eligible Radiologists, and established an outright prohibition of a DRG physician payment system involving Radiologists, Anesthesiologists, and Pathologists.

In addition, the Energy and Commerce Committee amended an onerous MAAC base period provision to allow physicians who had performed a procedure prior to April 1, 1984 but had no charges for that procedure submitted during April to June 1984, to obtain a MAAC for 1988. The base period for 1989 MAACs will be moved up to the twelve-month period ending June 30, 1986.

During Med-Chi's Council sessions of the 1987 operational year, several counselors stated their perceptions that the Executive Committee was taking action on matters that should be treated by Council. As a result, in April 1987 an Ad Hoc Committee to Study Role Relationships was formed to review the entire governance of Med-Chi and the relationship between the Executive Committee, the Council, and the House of Delegates. After months of deliberation by the Committee, a final report was submitted to Council on March 17, 1988. At that time, the following recommendations of the Ad Hoc Committee were approved: To establish specialty society representation within the Faculty's House of Delegates; to develop admission criteria for such specialty delegates to the Faculty House of Delegates; and to appoint subcommittees on medical practice, legislation, public health, membership services, and scientific affairs. Council also approved a recommendation that should the President be unable to preside over the House of Delegates, the presiding officer succession would be as follows: the President-elect, First Vice-President, Second Vice-President, and Third Vice- President.

In January 1988 evaluation of the Faculty's membership planning and recruitment efforts began. In March 1988, based on the results of this evaluation, Med-Chi's manage-

ment structure was reorganized to strengthen marketing orientation and membership recruitment activity. Currently, existing membership statistics are under analysis, and goals are being established to increase membership in the county medical societies and in Med-Chi.

In April, we concluded the calendar year with a very successful Annual Meeting at the Baltimore Convention Center.

It has been my honor to serve the Faculty's membership throughout this past year. I sincerely thank the leadership of Med-Chi and the individual physicians throughout the state who have offered advice and encouragement over these many months.

**ANGELO J. TROISI FACHE**
**Executive Director**

## Finance

*Mr. President and Members of the House of Delegates:*

The Finance Committee met several times during the year with representatives of the Bowman Financial Management Company, Inc. to review the Faculty Endowment Fund and Pension Plan Fund investment portfolios.

The stock market decline in October adversely effected the performance of the investments, but the Faculty investment performance still compares favorably to the major market indices, such as the S & P 500. At December 31, 1987, the market value of the Consolidated Fund was $1,349,957. The investment return for the year 1987 was 4.0 percent, and since inception was 15.4 percent.

The market value of the Steiner Fund portfolio was $827,854. The investment return for the Steiner Fund for the year was 4.3 percent, and 13.2 percent since inception.

The market value of the Pension Plan portfolio at year end was $1,112,117. The total time weighted investment return on the pension plan was 16.1 percent since inception.

The 1988 Budget was reviewed and finalized for recommendation to the Executive Committee and Council.

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## Hospital Medical Staffs

*Mr. President and Members of the House of Delegates:*

The Committee on Hospital Medical Staffs held four meetings during the past year to address issues involving hospital medical staffs and their relationship with hospital administration and with hospital governance bodies. Considertion was given to specific problems covering individual medical staffs at five Maryland hospitals. These problems included shortage in nursing personnel, less than optimal communication between a hospital medical staff and administration, and hospital marketing initiatives potentially damaging to a medical community.

Several policy initiatives were developed by the Committee and were subsequently adopted by Council. These included distribution of AMA model staff bylaws to the 52 hospital medical staffs in Maryland with the recommendation that individual hospital bylaws be reviewed and updated if necessary so as to comply with AMA recommendations. Also approved was the recommendation that all active members of medical staffs, geographic and nongeographic, be treated equally in terms of qualifications for positions on hospital staff committees, staff governance bodies and representation on hospital governing bodies elected by the general medical staff.

The Faculty also will develop a centralized legal service to advise subscribing medical staffs on legal matters of concern. Such service will be provided on a contractual basis and through the Faculty service corporation. This legal service is in keeping with AMA policy recommendations calling for hospital medical staffs to retain their own counsel for the specific purpose of providing advocacy and guidance to medical staffs as independent entities. A survey was conducted of all Maryland hospital medical staffs regarding existing methods of legal representation and to measure interest in participating in shared legal counsel through Med-Chi. The response was overwhelmingly positive.

In the area of quality assurance, the Committee recommended to Council that the Medical and Chirurgical Faculty of Maryland stay abreast of current actions in quality assessment and assurance as communicated by the American Medical Association and that periodic reports be provided to the Council on current quality assessment initiatives by the Committee on Hospital Medical Staffs. It also recommended that Med-Chi explore initiatives for the development of quality assessment and assurance programs including applications for grants. Both policy recommendations were adopted by Council and are being developed.

A resolution was developed and approved by Council calling on the Joint Commission on Accreditation of Hospitals to ensure that its inspectors sufficiently interact with medical staff during institutional inspections. Specifically, the resolution would enable the Governing Council of the American Medical Association - Hospital Medical Staff Section to study the feasibility of the JCAHO using the concepts of self-governance in quality control of all patient care and medical activities in the accreditation process with a report to the HMSS Assembly at the Interim 1988 meeting.

The Governing Council of the AMA-HMSS would review the JCAHO medical staff and governing body standards (and the inspection thereof by the JCAHO) for provisions that are not consistent with AMA policies on self-government and would recommend suggested changes and report to the HMSS Assembly at the Interim 1988 meeting.

As Chairman, I wish to extend my appreciation to Committee members for their valuable committment to this developing area of Faculty activity.

**VICTOR R. HREHOROVICH MD, Chairman**
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## Legislative

*Mr. President and Members of the House of Delegates:*

The 1988 Maryland General Assembly was a very productive legislative session for the physicians of Maryland. With the guidance and support of Governor William Donald Schaefer, Speaker of the House R. Clayton Mitchell, Jr., and President of the Senate, Thomas V. Mike Miller, Jr., many needed changes in the present law were effected. Other measures designed to erode the quality of health care in Maryland were defeated.

The physicians of Maryland are very well represented through the Co-Chairs of the Legislative Committee, Israel Weiner, MD and Leonard Lichtenfeld MD, with Susan Owens MD as Vice-Chair.

The following abbreviated account of major issues considered by the Legislative Committee of the Medical and Chirurgical Faculty does not cover every piece of legislation tracked by the Government Relations Office but only those of significant statewide interest.

The Government Relations Office is staffed to answer and address the concerns of physicians through legislative action. Do not hesitate to contact Gerard E. Evans, Director of Government Relations, 1211 Cathedral Street, Baltimore, Maryland 21201 if you have any concerns or questions about how the office may assist you.

The Faculty wishes to thank F. Carvel Payne, Director, State Department of Legislative Reference for graciously providing most of the following information.

### Mandated Medicare Assignment

HB 688 - Physicians - Medicare Charges (failed) Once again in the 1988 Session, Mandated Medicare Assignment was introduced by Delegate Paul Pinsky from Prince George's County. Seniors of Maryland mounted an impressive lobbying effort in support of this legislation. Busloads of seniors traveled to Annapolis weekly to lobby members of the House Environmental Matters Committee about the virtues of the legislation. Medicine was well represented with physicians who traveled from as far away as Allegany County and Wicomico County. Dr. Joseph O'Connor of the Massachusetts Medical Society led the testimony for the opponents. Dr. O'Connor spoke eloquently of the problems in Massachusetts stemming from Mandated Assignment. The testifying proponents of the bill were well organized and included economists from Johns Hopkins, representatives from the American Association of Retired People (AARP), and the State Office on Aging. Between the hearing and the time the legislation was voted on, the issue of a Means Test emerged as a compromise proffered by Delegates from Montgomery County. At the voting session, the House Committee rejected the proposal by a vote of 19 to 4. However, an unrecorded hand vote on the compromise proposal showed a substantial number of supporters. Many legislators who voted with us this year indicated that a Means Test seems to be a reasonable compromise. There was discussion about a movement to petition the bill out of Committee with an unfavorable report, but this attempt to resurrect the bill was stifled by the House leadership.

### Malpractice Insurance

SB 400 - Maryland Physician Liability Fund (failed)

SB 401 - Medical Malpractice Insurance - Rate Classification (failed)

HB 1342 - Medical Malpractice Insurance - Rating Classifications (failed) These three bills would have drastically altered the method of assessing Medical Malpractice Liability Insurance policies. In Maryland the legislation was designed to collapse the present experienced-based rating category system and to force physicians at the lower range of the malpractice liability rating system to pay for physicians in the higher categories. In fact, one of the bills, SB 401, would have required that all physicians in Maryland pay ex-

actly the same malpractice premium by dividing the total premium necessary to meet claims by the number of insured physicians. This would have driven up the price of insurance paid by primary care and similarly situated physicians to about $30,000 in the second year of a claims-made policy.

HB 944 - Health Care Malpractice Claims - Waiver of Arbitration-Retroactive Effect (passed) The passage of HB 944, sponsored by Delegates Ehrlich, Montague, Flanagan, Kelly, Poole, and Maddox, had a significant impact on the Medical Malpractice Liability outlook. The bill allows plaintiff and defendant to mutually agree to waive the Health Claims Arbitration process and take their claims and defenses directly to court. This emergency legislation was signed into law by the Governor on April 12, 1988.

SB 481 - Insurance - Loss Reserves - Medical Malpractice Claims (passed) Similarly, SB 481, sponsored by Senators O'Reilly and Kasemeyer, allows Med-Mutual to conservatively discount loss reserves. This legislation demanded a herculean effort to pass, as the companion House bill was defeated by the House Committee in a lopsided vote. With the help of Speaker Mitchell and Delegate Cas Taylor, Chairman of Economic Matters Committee, the Senate bill was received favorably by his Committee, and he guided it through the House of Delegates.

It is estimated that the effect of the passage of HB 944 and SB 481 will dramatically reduce the Medical Malpractice Insurance premiums paid by Maryland's physicians this year.

### Medical Discipline

SB 508/HB 855 - Medical Discipline - State Board of Physician Quality Assurance (passed) This year the Maryland General Assembly passed a much-needed enhancement of the Physician Peer Review System. The reorganization, designed by Governor Schaefer and Lt. Governor Steinberg provides increased budget and staffing while preserving the traditional integral role of the Medical and Chirurgical Faculty Peer Review Committee. The newly named Physician Quality Assurance Board will be composed of a combination of the functions of the Board of Medical Examiners and the Commission on Medical Discipline.

To comprehend how the new system will function, one must understand the clear policy statement made by the Governor and the Legislature through the enaction of this legislation. Heretofore, this has been unreported by the media. Once the clamor of citizens demanding radical reform had quieted and the Attorney General's Office, the trial lawyers, the citizens groups, the physicians assistants, and others had been beaten, the role of the Medical and Chirurgical Faculty emerged as the focal point of the new organization. Med-Chi is more firmly ingrained in the peer review system now than ever before.

Let's examine a breakdown of how cases will be channeled under the new system. First, all fee disputes (about 25 percent of all complaints filed against physicians) will go directly to Med-Chi without preliminary investigation. Med-Chi will make the final adjudication of fee dispute cases.

Second, cases involving standards of medical practice comprise the great majority of complaints against physicians. Disciplinary grounds such as competence make up this group. These cases are slotted for a preliminary investigation as necessary.

It is important to say a word about the use of investigators and hearing officers in the new system. The present statute allows the Commission to hire investigators and hearing officers to help in the resolution of cases; the new law codifies this existing provision. The investigator and hearing officers will be assigned to the Board and will not be part of the Department of Health and Mental Hygiene's central unit. This means they will be accountable to the physician-dominated board. The investigators will only perform preliminary investigations as necessary. Again, the Board has discretion in deciding what is necessary and what is not. Preliminary investigations means just that: the collection of records, the conduction of interviews, and the like.

Whether or not a case receives a preliminary investigation, all cases involving standards of medical practice shall be sent to Med-Chi or the appropriate component or specialty society for peer review. Med-Chi retains its traditional role in peer reviewing physicians in all cases involving the standards of medical practice.

Third, and perhaps most important in terms of impact although not numbers of cases, are situations in which physicians have been convicted of crimes of moral turpitude. Although limited in number, theses cases get the most media attention. The Governor insisted that physicians who have been convicted of such crimes should be dealt with sternly. Although these physicians will have every benefit of due process and the right to a hearing, their licenses will be suspended automatically. Although the term "moral turpitude" eludes exact definition, we know from case law that situations of rape and drug distribution clearly are crimes of moral turpitude.

Med-Chi has maintained its historical role in the direct peer review or resolution of all cases except convictions of crimes involving moral turpitude.

As far as the appointment of new board members is concerned, Med-Chi recommends 10 of the 15 members to the new board. This two-thirds proportion is the exact ratio we exercised over the combination of members on the Board of Medical Examiners and the Commission on Medical Discipline.

Perhaps the most important feature of the new legislation (and an aspect vigorously attacked throughout the legislative process) was the following. Formerly, if a physician were brought before the Commission on Medical Discipline the evidence would be judged by a legal standard known as "preponderance of the evidence." Preponderance of the evidence in quantitative terms means about 51 percent. On this basis the Commission could find someone in violation of the statute. As of July 1, 1988 the standard necessary to find a physician incompetent in Maryland was elevated to "clear and convincing evidence." Clear and convincing evidence is a substantially higher burden the State must meet in order to take action.

### Medical Laboratory Regulations

SB 659 - Medical Laboratories - Regulations (failed)

SB 320 - Pap Smear Test - Medical Labs - Regulations (passed)

HB 1293 - Medical Laboratories and Procedures (passed)

SB 753 - Human Immunodeficiency Virus (HIV) - Donors of Semen, Blood, or Tissue (passed)

HB 1329 - Medical Laboratories - Human Immunodeficiency Virus Tests - Reporting (passed) The issues and concerns surrounding Medical Laboratories were given a great deal of attention this Session. Some of the attention followed media reports about the unreliability of the Pap Smear. Several legislators were motivated by reports from Senator Barbara Mikulski who referred to those taking and examining the Pap Smear as "propagating medical mugging." She called the situation "scandalous" and urged legislators, both state and federal, to enact stricter laws to closely regulate and scrutinize physicians and their laboratory practices. Like Senator Mikulski, Dr. Joseph (PhD) of the Maryland Department of Health and Mental Hygiene testified before several Legislative Committees in Annapolis urging stricter control over Medical Laboratories. Although Dr. Joseph was very critical of the larger, so-called commercial laboratories, he was particularly critical of small physician laboratories. He claimed these physician laboratories posed a public health problem to Maryland citizens which, by comparison, made the Pap Smear issue insignificant. Dr. Joseph urged the Maryland Legislature to abolish the right of small physician practices to maintain medical laboratories. It seems his words were heeded: Senator Leo Green (D-Bowie) introduced SB 659 that essentially would have carried out the dismantling of small practice physician laboratories. After a significant lobbying effort, SB 659 was defeated in Committee although the fate of small practice physician laboratories may be in jeopardy. Dr. Joseph intends to continue his crusade, and the Legislature has indicated it will look at the issue in a summer study during the interim. ANY PHYSICIAN INTERESTED IN THIS ISSUE, PLEASE CONTACT THE GOVERNMENT RELATIONS OFFICE.

Because of the increasing incidence of cervical cancer in women going undetected and the criticism of the administration and examination of Pap Smear tests, the General Assembly passed SB 320/HB 1293 to regulate the cytology industry. SB 320/HB 1293 require the Secretary to adopt regulations establishing specific standards for medical laboratories engaged in cytology including regulations that limit the number of slides a cytologist may examine each year, prohibit the off-site or piecemeal examination of slides, provide for review of at least 10 percent of all negative Pap Smears, and require an on-site quality assurance program. The bills also mandate the Department of Health and Mental Hygiene to establish and conduct a cytology proficiency testing program for all cytology personnel in Maryland. Proficiency tests under this program are to be hand carried, on-site, and under the supervision of an official of the Laboratories Administration in DHMH. HB 1293 also requires proficiency testing program to be hand carried, on-site, and unannounced. Lastly, HB 1293 requires the Department of Health and Mental Hygiene to conduct a study on physicians or groups of physicians performing medical laboratory procedures that are currently exempt from the permit requirements.

In an effort to obtain better data on the extent of the AIDS crisis in Maryland SB 753/HB 1329 require medical laboratories that test serum samples for the Human Immunodeficiency Virus to submit monthly statistical reports to the Department of Health and Mental Hygiene. The bills specify that the monthly report may not disclose, directly or indirectly, the identity of any individual tested.

### Utilization Review

SB 658/HB 960 - Health-Care Utilization Review - Private Review Agents (passed) In 1985, as a part of its health-care cost-containment efforts, the General Assembly mandated that all hospital administrations undergo utilization review to eliminate inappropriate use of health-care services. Because of the increasing reliance on utilization review, the number of independent private review agents expanded greatly, creating severe administrative problems. Hospitals found themselves confronted with a plethora of standards and systems; the result was confusion and uncertainty as to what services were necessary and reimbursable. To address these concerns, the General Assembly passed SB 658/HB 960, the first legislation of its kind in the country, requiring private review agents to register with the state and to obtain a certificate from the Secretary of Health and Mental Hygiene before conducting utilization review. To become certified, a private review agent must submit a plan, outlining its program's purpose, requirements, notification and appeals process and provide assurances that procedures will protect the confidentiality of patient records. The bill, however, does not establish uniform standards for determining medical necessity. SB 658/HB 960 becomes effective December 1, 1988 in order to provide interested parties an opportunity to participate in the adoption of the implementing regulations.

### AIDS

SB 215/HB 16 - Firefighters, Emergency Medical Technicians, and Rescue Squadmen - Exposure to Disease (passed)

SB 753/HB 712 - Human Immunodeficiency Virus (HIV) - Donors of Semen, Blood, or Tissue (passed)

SB 826/HB 1329 - Medical Laboratories - Human Immunodeficiency Virus Tests - Reporting (passed) Twenty-one bills, either pertaining to AIDS directly or to contagious diseases in general, were introduced this year. Of these, three were reported favorably, several were withdrawn, and others failed.

SB 215/HB 16 (passed) require emergency personnel be notified by medical facilities if an exposure to AIDS has oc-

curred. Specifically, the bills provide that if a firefighter, emergency medical technician, rescue squadsmen, or law enforcement officer, while treating, transporting, or acting in the performance of duty, comes into contact with a person who subsequently is taken to a medical facility and diagnosed as having the AIDS virus, notification must occur. It is important to note that medical facilities and physicians acting in good faith to provide the required notice are immune from actions related to breaches in patient confidentiality. Similar notification concepts contained in other bills, HB 132, HB 1204 and HB 1207 (all failed), were incorporated in the amended version of SB 215/HB 16.

SB 753/HB 712 (both passed) require any institution that processes semen, blood, or tissue to test all potential donors for the presence of HIV antibodies. The institution must inform the potential donor that he or she will be tested and must obtain written consent for the administration of the test and anonymous disclosure of a positive test result to the Health Department.

Finally, SB 826/HB 1329 (both passed) extend the available data base on AIDS in an effort to get a better grasp on the magnitude of the epidemic. The bills require the director of a medical laboratory to submit to the Department of Health and Mental Hygiene a monthly report containing the number of serum samples tested for AIDS, the number of positive test results, and a breakdown of results by age, race, sex and county of residence. These requirements do not apply if the data is not available or if it would lead to the disclosure of the identity of the individual.

The legislature considered but did not pass a bill that would have required the offering of premarital testing for AIDS (HB 34), two bills that would have required quarantine or isolation of persons (SB 316/HB 1073), a bill that would have required the testing for AIDS of persons who bite others (SB 296/HB 251), or who assault others (HB 104) and a bill that would have expanded the prohibitions against willfully exposing others to disease (HB 43). Three bills failed (SB 621, HB 495, and HB 1434) that would have required notification to morticians or notification on a death certificate if AIDS were the cause of death.

Also failing was a bill that would have required hospitals to permit autologous blood donations for use in nonemergency procedures (HB 36). Most Maryland hospitals with facilities for accepting blood donations already permit donations of one's own blood for one's own use.

### Medical Records

SB 856 - Medical Records - Request for Information (failed) If SB 856, introduced by Senator Stone, Baltimore County, had passed, physicians would have been required to inform patients about each and every entry in their medical record. Further, physicians would have been required to explain the entry to the patient so that the patient understood the record entry. The bill was heard in Senate Economic and Environmental Affairs Committee and defeated by an overwhelming vote. Informed sources indicate the bill will be back again next year during the 1989 Legislative Session.

### Peer Review - Liability

HB 398 - Physicians - Immunity from Civil Liability (passed) The passage of HB 398 makes physicians immune from civil liability for giving medical institutions information relating to the qualifications, fitness, or character of a physician if the information is given in good faith to aid in an evaluation and represents what the person believes is true.

### Smoking

SB 325 - Tobacco Smoking - Retail Stores (passed)

SB 324/HB 899 - Tobacco Smoking - Retail Food Stores (failed)

SB 326/HB 923 - Nonsmoking Areas in Restaurants and Cafeterias (failed)

HB 113 - Smoking in Public Places (failed) After several years of debate, the General Assembly passed SB 325, which prohibits smoking in the public areas of retail stores employing 20 or more full-time employees. Supervisors must post signs prohibiting smoking or face a fine. Because retail food stores are covered under SB 325, two bills SB 324/HB 899 (which would have prohibited smoking in this setting), did not pass. Other bills (SB 326/HB 923) that would have required the manager of a cafeteria or restaurant with a seating capacity of more than 50 people to provide a conspicuously posted, designated nonsmoking area for the public, did not pass. A broader bill (HB 113) that would have prohibited smoking in all sections of public places except areas designated through regulations by the Department of Health and Mental Hygiene, failed.

### Radiation Technologists

SB 750/HB 612 - Certification of Medical Radiation Technologists and Nuclear Medical Technologists (passed) The effective date for requiring certification of radiation technologists was delayed until July 1989 by these two bills. The bills also specify that persons nationally certified are automatically certified under the bill, and persons practicing radiation technology as of July 1, 1988, who are uncertified, may receive temporary certification from the Board for a period of two years from the effective date of the bill. During this time persons with temporary certification must take a test of proficiency from the Board for permanent certification. Physicians who may practice radiation technology as part of their scope of practice are exempt under the bill's requirement.

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## Liaison with the Department of Health and Mental Hygiene

*Mr. President and Members of the House of Delegates:*

The Committee maintains continuous liaison with the Maryland Medical Assistance Program. For fiscal year 1989, the recently reorganized Health Systems Financing Administration of the Department of Health and Mental Hygiene will manage a budget of $950,000,000, providing health care services to approximately 342,000 Medicaid beneficiaries.

Throughout the past year, the Committee monitored and consulted with the Department regarding the development of the budget and increased expenditures in AIDS prevention, pediatrics, geriatric, mental health, and obstetrics. Generally, the budget includes a 9 percent increase for the provision of primary care by physicians.

One issue that generated a good deal of controversy was the proposal to direct all General Public Assistance beneficiaries (those individuals covered fully by the state without federal matching funds) into managed care systems. This Committee (and many other groups) objected to the proposal, resulting in its withdrawal by the Department. We will carefully monitor further developments in this aea.

The Committee also reviewed a proposal to reduce costly emergency department visits and to correct payment inequities endured by emergency medicine physicians. This is an ongoing matter that will be addressed by policy and budgetary groups within the Department.

We are planning to strengthen the established liaison with the Department through improved ties with the Deputy Secretary for Public Health Services. I extend my sincere appreciation to the members of this Committee who have given their valuable time to these endeavors.

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## Liaison with Third-Party Carriers

*Mr. President and Members of the House of Delegates:*

The past year saw the continuation of the Medicare Maximum Allowable Actual Charge (MAAC) reimbursement system with its related confusion and arbitrary implementation by the two Medicare carriers in Maryland. A series of three MAAC seminars were held at the Faculty building designed to assist physicians and office personnel regarding proper compliance with this requirement. The seminars were well attended.

Of particular concern was the issuance of letter by Medicare carriers to physicians and beneficiaries indicating that a particular medical service was not considered reasonable and necessary, and directing the physician to refund the beneficiary a specified amount of money. In one instance the refund in question was as little as fifteen cents! The Faculty worked in conjunction with the AMA on this problem and the Health Care Financing Administration consequently issued directives to Medicare carriers modifying the arbitrary methods by which many such letters were issued. This matter remains under active review by the Committee.

Early in the year the Chairman worked with a Med-Chi Task Force regarding the National Blue Cross and Blue Shield Association's Diagnostic Testing Guidelines. Assurances have been made by Maryland Blue Cross and Blue Shield that there is no intent by that organization to apply the guidelines as a reimbursement mechanism. This entire issue will be monitored closely.

Most recently, the Committee has been discussing the practices of health insurance companies whereby revenue obtained through indemnity programs is directed to develop and subsidize managed systems and other ventures. We anticipate much activity in this area during the upcoming year. Other general areas of activity included vigorous discussion with Third-Party Payors regarding claims specific problems brought to our attention by Med-Chi members, review of corporate policies, electronic billing systems, and other issues. We are confident that this Committee provides a good medium for problem resolution, and we are appreciative of the availability of third-party representatives who interact directly with our group.

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## Library and History

*Mr. President and Members of the House of Delegates:*

The year 1987-1988 was one of transition for the Faculty's library. Nancy T. Nichols MD was appointed by the President to chair the newly formed Library Committee under the revised bylaw regarding the Faculty's Library. The Committee met five times during the past year. These meetings have served largely as an orientation for the Chairperson and the Committee members, with presentation on the history of the Faculty's library, the library's place within the organizational structure of the Faculty, the library's services to members of the Faculty, the extent of use of the library by faculty members, the sources of the library's funding, the library's relationship to the National Library of Medicine and to other libraries, and the library collection, especially its rare and historical books.

In addition to the bylaw change and the new Chair and Committee, there were turnovers in three key staff positions. All this while the final stages of renovations and restoration to the library were under way.

In September 1987 the Faculty's Librarian, Joseph Jensen became Director of Health Policy Research and Information Systems for the Society. In September, Patricia Munoz, Cataloging and Acquisitions Specialist, transferred to become the Faculty's Director of Convention Services. In December 1987 Deborah Woolverton resigned her position as History of Medicine Specialist and Archivist.

The Faculty named Adam Szczepaniak as Library Director, to succeed Mr. Jensen. Susan Harman was promoted to Associate Librarian and Head of Cataloging Services. Sharon Seide joined the Faculty as Public Services Librarian, following a move from Iowa. The position for Archivist and History of Medicine Librarian is yet to be filled.

The Cataloging Department has moved to a larger office on the third floor in the new building. The Public Services Department and periodical reading room now occupy the renovated third floor of the old building.

### Information and Reference Services

The number of Faculty members who used the services of the library during 1987-1988 remained virtually the same as during the last two years; 1,105 members used the library for either photocopying services or computerized literature searching, which represents approximately 20 percent of the Association's active members.

The following table itemizes the volume of informational and reference services for 1987-1988:

| | |
|---|---|
| Computerized database searches | 1,692 |
| Photo copied articles | 7,754 |
| Items borrowed from other libraries | 1,773 |
| Items loaned to other libraries | 1,486 |
| Telephone reference questions | 8,606 |

The income generated from photocopying and literature searching services again increased. The library has generated sufficient income to cover the cost of operating these services without seeking additional Faculty support.

Eighteen corporate users and four individuals subscribed to membership in the Library's Non-Affiliated Users Program, generating $3,100 income.

### Library Resources

The library continued to provide book purchasing services to both Faculty members and the Maryland hospital libraries. This program remains very popular.

The library staff under the direction of Charlotte Karin initiated a weeding program to identify unused and out-of-scope books in the collection. So far, the project has succeeded in reviewing all books purchased by the Faculty since 1972. The next phase will include all the books purchased between 1950 and 1971.

The following table reflects the adjusted change in the size of the library's collection in the past year:

| | |
|---|---|
| Books added | 277 |
| Journals bound | 760 |
| Total volumes added | 1,037 |
| Volumes with drawn | 2,575 |
| Total volumes in collection | 109,298 |

### History of Medicine and Rare Books

At the Faculty's 1988 Annual Meeting the library's exhibit was a special project, "Is There a Doctor in the House?" featuring physicians who have been elected to or served in some capacity at the Maryland State House. The exhibit duplicated an exhibit the staff prepared and placed on display at the Maryland State House in Annapolis while the 1988 legislature was in session.

The Chirurgical Bookshop issued one catalog this year and generated $1,024 income from sales.

### Staff Activities

Library staff represented the Faculty at two national library meetings during the past year: the annual meeting of the Medical Library Association in Portland, Oregon in May 1987, and the Special Library Association's annual meeting in Anaheim, California in June 1987.

The state of Maryland hosted the annual meeting of the Mid-Atlantic Chapter of the Medical Library Association in October 1987. Several members of the library staff were part of the local arrangements committee for the meeting.

The entire staff participated in the annual meeting of the Faculty. The library's exhibit booth allowed staff to meet Faculty members and to demonstrate and to promote the library benefits of Faculty membership.

### Plans for 1988-1989

There will be a gala rededication ceremony for the renovated Faculty Library in September 1988, held in con-

junction with the semiannual meeting of the Faculty's House of Delegates. At the ceremony, the restored reading room will be formally designated as the "Louis A.M. Krause, MD History of Medicine" room. More than 15 ago, the Faculty's House of Delegates resolved that when an appropriate room was prepared to house the Faculty's great historical and rare book collection, the room should be dedicated to the memory of Dr. Krause, whom many physicians still recall as a beloved teacher and fellow practitioner.

The dedication will also mark the designation of the Faculty's library as a repository and clearinghouse for all publications and information dealing with medical problems of performing musicians. The ceremony will include an appropriate musical program.

The library will begin providing all its bibliographic searching services using compact discs. Up until this time, literature searching has required on-line use of the National Library of Medicine's computer. The final bibliographics will appear the same to physicians. However, the process will permit greater flexibility in making the services available and in the format of the bibliographies. It may be possible to permit Faculty members who own computers to do their own literature searches at any time from their homes or offices.

By midyear the Cataloging Department will begin establishing a computerized record of all the library's books and periodicals. During the early phase, all new books purchased will be cataloged into the database. Gradually, older items will be included.

The weeding project will continue. A goal is to conduct a thorough review of all the journal holdings.

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## Long-Term Care and Geriatrics

*Mr. President and Members of the House of Delegates:*

The Committee on Long-Term Care and Geriatrics met five times between September 1987 and May 1988.

The Committee has concentrated on its long-standing commitment to assuring the highest quality of care in long-term care facilities. For the past year, the two major goals of this Committee have been: Continuing Medical Education by bringing the special problems of the elderly to the attention of physicians and developing educational resources in these areas, and Consumer Information by educating the public about what physicians can offer in the care of the elderly.

The Committee was charged with expanding its responsibilities in other areas of geriatric care. After review and editing, recommendations were submitted to the Bylaws Committee for its approval and presentation to the Executive Committee for acceptance.

In November 1987, the Committee met with representatives from the University of Maryland Geriatrics and Gerontology Education and Research Council concerning consumer information and linking the activities of the Committee with those of the GGEAR Program.

The Committee submitted to Med-Chi's Executive Committee a plan for an educational program that is being developed in cooperation with the Center for Health Education and is scheduled for early 1989.

The Committee cosponsored (with the Maryland Academy of Family Physicians) the Coggins Memorial Lecture at Med-Chi's Annual Meeting in April 1988. Mark Williams MD, Director of the Program on Aging, University of North Carolina at Chapel Hill, presented discussion on "Geriatric Assessment."

In May 1988, the Committee sponsored the Tenth Annual Meeting of Medical Directors and Principal Physicians, and over 100 physicians throughout Maryland were invited. Delegate Tony Fulton of the Environmental Matters Committee presented a discussion of audits and problems of long-term care financing. The group also was addressed by Thomas F. Krajewski, MD, Director of Clinical Programs for the Mental Hygiene Administration, concerning transinstitutionalization between psychiatric hospitals and nursing homes.

In closing, I extend my sincere appreciation to the members of this committee and staff who have given their valuable time and services to these important issues.

**GEORGE TALER MD, Chairman**
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**HUBERT L. FIERY MD**
**JOSEPH R. GLADUE MD**
**HOWARD J. HOFFBERG MD**
**ZORAYDA M. LEE-LLACER MD**
**LOIS LEONARD MD**
**HERBERT J. LEVICKAS MD**
**ALLAN MACHT MD**
**PAULA R. MACRAE MD**
**DONALD W. MINTZER MD**
**JANET V. SHORT MOGHBELI MD**
**EDDIE NAKHUDA MD**
**MARK RATNER MD**
**JULIAN W. REED MD**
**PAUL S. RHODES MD**
**AUBREY D. RICHARDSON MD**
**DEBRA WERTHEIMER MD**
**BENJAMIN K. YORKOFF MD**
**JOSEPH W. ZEBLEY MD**

## Maryland Medical Journal

*Mr. President and Members of the House of Delegates:*

This report covers the period from August 1987 to August 1988, during which MMJ continued its excellent health and growth because of our outstanding local advertising sales and the efforts of the Managing Editor to keep production costs under control. Page count for volume 36 (1987) was 1,084, up 16 pages from 1986. Issues averaged 92 pages, and distribution of copies was about 7,100 each month. Waverly Press continues to provide satisfactory local printing and distribution services.

Advertising increased in 1987, but both national pharmaceutical and local advertising sales slumped during the first three months of 1988, reflecting the black Monday in October. We anticipate increased page sales and a more consistent picture for the remainder of 1988. Editorial Board policy dictates that the ratio of advertising will be approximately 40 percent advertising to 60 percent text; the average number of advertising pages per issue was 47 percent, as it was last year. Production costs have remained relatively stable, but postal rates continue to increase.

During the past twelve months *MMJ* has produced five special issues, each concentrating on a specific topic. There will be two more "dedicated" issues in volume 37, and two groups already have planned issues for the 1989 volume year. The November 1987 *MMJ*, Adolescent Pregnancy: A Multispecialty Issue, was compiled under the aegis of the Center for Health Education. It included twelve articles and two resource lists. January 1988 featured four articles related to the Maryland legislative session as well as a Legislative Directory and was organized by the Faculty's Governmental Relations Department, headed by Gerard E. Evans, Esquire. Med-Chi's Committee on Physician Rehabilitation celebrated a tenth anniversary in the March issue with eight articles and a resource list.

In May, National High Blood Pressure Month, the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors coordinated an eleven-article issue devoted to public health and clinical approaches to reducing the morbidity and premature mortality resulting from uncontrolled hypertension and related risk factors. The July issue comprised articles describing ten areas of the Maryland Insitute for Emergency Medical Services Systems (MIEMSS) and gave an updated overview of the entire system.

The majority of *MMJ* business is conducted by correspondence. The full Editorial Board met three times during the past year to consider items that merited full board discussion. Some 74 manuscripts were reviewed in 1987; of the 40 unsolicited papers, 28 were accepted for publication, indicating a 30 percent rejection rate.

For the past twenty years MMJ has been indexed by the Medical Literature Retrieval Systems (MEDLARS) on an average of one hundred times each year. A worldwide service, MEDLARS indexes in forty different languages.

The *Maryland Medical Journal* always has invited comments as well as scientific articles. During the 1987 volume year and through June 1988, twelve Commentaries, five Editorials, and four Letters to the Editor have been published.

With the February 1988 issue a new administrative insert, "Quality Practice Digest," was added to follow each "Executive Director's Newsletter." A summary of state laws as well as guidelines, procedures, codes of cooperation, and policy statements of Med-Chi, the "Digest" reflects current areas of concern to Maryland physicians.

*MMJ* has been able to use Med-Chi's inhouse Computer Services to good advantage. The April cover used a computer-generated map of Maryland to show the number of reported cases of Rocky Mountain Spotted Fever in the state in 1987. We hope to take advantage of even more inhouse computer capabilities in the near future.

In April 1988, the Managing Editor was invited to speak to a resident seminar in the Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine. Ms. Wintriss discussed journal article preparation in general terms and manuscript preparation and editing with particular reference to the *Maryland Medical Journal* and its editorial goals and policies.

As always, everyone associated with the production of the journal welcomes comments from Med-Chi members regarding any and all facets of the publication. The rationale for any editorial decision will be shared with anyone having an interest in *MMJ*. The Editorial Board and the Managing Editor thank the many outside reviewers of manuscripts who so graciously donated their time and expertise in assisting the Editorial Board in this important function over the past year. We also appreciate the careful attention of individual department editors who monitor their columns for scientific accuracy and correct citations.

**JAMES G. ZIMMERLY MD, JD, MPH, Editor**
**VICTOR R. HREHOROVICH MD, Associate Editor**
**RICHARD A. BAUM MD**
**DeWITT E. DeLAWTER MD**
**JAMES P.G. FLYNN MD, MPH**
**PHILLIP J. GOLDSTEIN MD**
**FRED J. HEDLRICH MD**
**LOUIS KOZLOFF MD**
**ANN WINTRISS, Managing Editor**

## Med-Chi Insurance Fund

*Mr. President and Members of the House of Delegates:*

The Med-Chi Insurance Fund Board of Directors met regularly in 1987 to carry out their responsibilities of directing the operation of the Med-Chi Agency and of monitoring the various insurance programs provided to the membership.

The Hartford Plan of Major Medical and Disability coverage was improved again in 1987. Psychiatric benefits were increased for physicians and their employees. Disability benefits for physicians employees were increased to a maximum of $500 per week.

Every group plan has increased in subscriber participation. The newest life insurance group plan underwritten by the Manhattan Life Insurance Company continues to attract participants. The Blue Cross and Blue Shield plans are at their highest in membership subscriptions. The Workers Compensation plan is very successful because of the substantial cost reduction for the physicians.

The Property and Casualty Department is the busiest and most profitable. There are three full-time people involved in that area because Professional Liability Insurance is the main product. Other coverages are homeowners, automobile, and personal umbrella.

The overall operation of the Med-Chi Agency has grown every year, and 1987 was the most successful year since its establishment.

The Board of Directors are most appreciative of the enthusiastic participation in the programs. This support enables us to continually upgrade the products and offer the most economically sound plans of the market.

**W. KENNETH MANSFIELD MD, Chairman**
**ADRIAN M. COHEN MD**
**WILLIAM J.R. DUNSEATH MD**
**PAUL F. GUERIN MD**
**DONALD T. LEWERS MD**
**GEORGE E. LINHARDT, Jr., MD**
**JOSE M. YOSUICO MD**

## Medicine and Religion

*Mr. President and Members of the House of Delegates:*

The Medicine and Religion Committee held three meetings during the past year. Activities included the following:

a. Sponsoring the Prayer Breakfast during Med-Chi's 1988 Annual Meeting at which Theodore E. Woodward MD gave a presentation, "Religion and Medicine: A Centuries Old Relationship."

b. Cosponsoring a session with the Professional Ethics Committee during Med-Chi's 1988 Annual Meeting entitled "Hippocrates and Euthanasia."

**LESLIE R. MILES, Jr., MD, Chairman**
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**DAVID W. FRICKE MD**
**THOMAS C. HILL MD**
**BERNARD F. KOZLOVSKY MD**
**ROBERT I. McALLISTER MD**
**ARNOLD H. MICHAEL MD**
**DAVID I. OTTO MD**
**GIBSON J. WELLS MD**

## Medicolegal

*Mr. President and Members of the House of Delegates:*

The Medicolegal Committee, sponsored jointly by the Medical and Chirurgical Faculty of the State of Maryland, the Maryland State Bar Association, and the Baltimore City Bar Association, has continued its work in bringing the medical and legal professions closer together. The Committee rendered advisory opinions on complaints from either discipline. Again this year, the Committee organized a Medicolegal Hotline staffed by committee members for quick resolutions of simple disputes.

In addition, the Committee sponsored and presented a program at the April Annual Meeting of the Faculty, "Malpractice Law and Legislation." The panelists were distinguished and knowledgeable physicians, judges, and attorneys. The program was well received.

The Committee's Executive Board continues to meet between meetings of the entire Committee.

**LAWRENCE PINKNER MD, Co-Chairperson**
**PATTI G. WEST, ESQ, Co-Chairperson**
**ROBERT W. BRIGHT MD**
**RAYMOND CAPLAN MD**
**EDWARD J. CONNER MD**
**EDWARD DEVIN MD**
**RAFAEL C. HACISKI MD**
**MURRAY F. HAMMERMAN MD**
**ALLEN HETTLEMAN MD**
**NEIL NOVIN MD**
**JOHN H. WEIGEL MD**
**MARY ALANE DOWNS, ESQ**
**PHILIP C. FEDERICO, ESQ**
**L. RICHARD PHILLIPS, ESQ**
**CHARLES B. KEENAN, Jr., ESQ**
**WILLIAM W. CAHILL, Jr., ESQ**
**JOHN WHEELER GLENN, ESQ**
**AUGUSTUS F. BROWN, IV, ESQ**
**PHILIP A. DALES III, ESQ**
**WILLIAM H. ENGELMAN, ESQ**
**BAYARD Z. HOCHBERG, ESQ**
**JEANNETTE A. PLANTE, ESQ**
**VICTORIA E. SELPH, ESQ**
**ELLEN CALLEGARY, ESQ**
**JEFFERY A. SHANE, ESQ**

Complete **Information for Authors**
about submitting manuscripts
to the *Maryland Medical Journal*
will appear quarterly (SEP/DEC/MAR/JUN)
in the meantime, please refer to
June 1988, page 450

## Nominations

*Mr. President and Members of the House of Delegates*

For presentation to the House of Delegates, Wednesday, April 27, 1988. Those elected will assume office at the conclusion of the Annual Meeting, 1989 unless otherwise indicated.)

*President-elect*
Raymond M. Atkins, Baltimore, Baltimore City
(President-elect 1988-89) (President, 1989-90)

*First Vice-President*
Marvin Schneider, Wheaton
Montgomery County (1989)

*Second Vice-President*
Bahram Erfan, Riverdale
Prince George's County (1989)

*Third Vice-President*
Alex Azar, Salisbury, Wicomico County (1989)

*Secretary*
Harold B. Bob, Baltimore, Baltimore County (1989)

*Treasurer*
Jose M. Yosuico, Baltimore, Baltimore City (1989)

*Committee on Scientific Activity* (6-year term--1989-1995)
Benjamin V. Del Carmen, Baltimore
Baltimore County

*Finney Fund Committee* (5-year term--1989-1994)
Edmund G. Beacham, Baltimore, Baltimore City

*Delegates to the AMA*
Joseph Snyder, Silver Spring, Montgomery County
(January 1, 1989-December 31, 1991)
Alex Azar, Salisbury, Wicomico County
(January 1, 1989-December 31, 1991)

*Board of Medical Examiners* (4 year term)
Vacancy (No Nominee Selected)
(June 30, 1988-June 30, 1992)
Vacancy (No Nominee Selected)
(June 30, 1988-June 30, 1992)

**DONALD T. LEWERS MD, Easton, Chairman**
**STEPHEN K. PADUSSIS MD, Baltimore,**
**Baltimore City District**
**A.H. GHILADI MD, Towson, Baltimore County District**
**MARVIN SCHNEIDER MD Wheaton,**
**Montgomery County District**
**BAHRAM ERFAN MD Riverdale,**
**Prince George's County District**
**FEDERICO G. ARTHES MD, Berlin, Eastern District**
**D. V. FAUSTINO MD, Hampstead, Western District**
**MODESTO S. RIVERA III MD, Prince Frederick,**
**Southern District**
**HIROSHI NAKAZAWA MD, Baltimore,**
**Member-at-Large**

## Occupational Health

*Mr. President and Members of the House of Delegates:*

The Occupational Health Committee met five times during the past year. Its main activity was drafting suggested modifications to the psychiatry and musculoskeletal sections of the *AMA Guides to the Evaluation of Permanent Impairment* for submission to the Workers' Compensation Commission. In legislation passed last year, the Workers' Compensation Commission was directed to adopt its own guidelines by July 1, 1988. The Committee thought that if the Commission adopted the AMA's guides, these two sections needed modifications.

The Committee also held a panel session at Med-Chi's Annual Meeting, "Guides for Reporting Permanent Impairments to the Compensation Commission." Commissioner G. Joseph Sills, Jr. was among the panelists who familiarized physicians with the guides to be adopted by the Commission for measuring and reporting medical evaluations of permanent impairment.

**MICHAEL K. SPODAK MD, Chairman**
**TIMOTHY D. BAKER MD**
**DENISE M. BAYUSZIK MD**
**HERBERT L. BLUMENFELD MD**
**S. CHANARONG MD**
**PETER CHODOFF MD**
**JAMES FRENKIL MD**
**SIDNEY R. GEHLERT MD**
**GEORGINA Y. GOODWIN MD**
**ERCOLINA A. GRESIA MD**
**ENRIQUE A. HERRERA MD**
**THOMAS E. HOBBINS MD**
**FERDINAND G. MAINOLFI MD**
**EMMANUEL M. MANIAGO MD**
**CHRISTIAN S. MASS MD**
**MICHAEL D. POTASH MD**
**JOSE G. PUIG MD**
**JAMES C. RICELY DO**
**NORMAN B. ROSEN MD**
**HENRY S. SABATIER MD**
**HENRY M. SCAGLIOLA MD**
**ROSE SESSOMS MD**
**RAJINDAR S. SIDHU MD**
**ROLAND T. SMOOT MD**
**BORIS G. VLALUKIN MD**
**EDWIN W. WHITEFORD MD**

## Peer Review

*Mr. President and Members of the House of Delegates:*

Last year, we observed that Senate Bill 560 would significantly increase the volume of cases coming before this Committee. Although some newspaper articles have tarnished the image of physician peer review during the year, the Faculty, through its legislative efforts, has received continued support of its peer review system from the Governor and the State Legislature. The legislature has provided the resources and assistance to improve the system, and we have been assured that standards of medical care will continue to be established and monitored by physicians.

Committee members and staff have worked to improve the system by devoting a great deal of their time and energy to the task. The Committee's work includes comprehensive and periodic review in most cases. A review of committee activities reveals:

| | |
|---|---|
| Cases referred by Commission on Medical Discipline | 58 |
| Physicians interviewed | 10 |
| Site visits | 28 |
| Recommendations to Commission on Medical Discipline | 55 |
| Final actions by Commission on Medical Discipline | 23 |

These figures do not include cases that were referred to component societies or single patient complaints that were referred to another Med-Chi committee for resolution.

Because it is not possible to have all specialties represented on the Committee, each Maryland specialty society has been asked to submit the names of physicians who are willing and able to assist in the peer review process. We have received timely responses from the societies and already have benefited from their services.

The Committee members and staff are anxious to undertake the challenges ahead, which include the implementation of the new Board of Physicians Quality Assurance. Peer Review Committee members have been attentive and devoted and in addition to attending at least monthly meetings, its members work many hours in conducting site visits, reviewing medical records, and submitting written reports. The Chairman expresses his gratitude to all committee members, to the specialty consultants, and to the Med-Chi staff for its able assistance.

**EMIDIO A. BIANCO MD, Chairman**
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**WILLIAM A. CASSIDY MD**
**RONALD COHEN MD**
**AUGUSTO R. DE LEON MD**
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**JAMES W. KARESH MD**
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**GERALD P. STERNER MD**
**SUSAN T. STRAHAN MD**
**LARRY G. TILLEY MD**
**RICHARD L. WOLFE MD**
**HERBERT L. YOUSEM MD**

## Physician/Patient Relations

*Mr. President and Members of the House of Delegates:*

The Physician/Patient Relations Committee continued its vigorous schedule throughout the last year. In our second year since Senate Bill 560 became effective, the Committee has enjoyed further improvements in the system, although no less a workload. The Committee continues to investigate complaints resulting from the practice of medicine including Health Claims Arbitration cases. Reports and recommendations are submitted to the Maryland Commission on Medical Discipline for consideration of disposition.

A review of the Committee's activities reveal the following statistics:

| | |
|---|---|
| Cases referred by the Commission | 131 |
| Total interviews | 8 |
| Physicians | 7 |
| Complainants | 1 |
| Grievances between physicians | 10 |
| Professional association designation | 11 |

In addition, Committee members and staff responded to innumerable inquiries regarding the practice of medicine and related issues. These questions vary in source and complexity and are answered thoroughly and appropriately. I am confident that this particular function is successful in fostering proper communication relative to the physician/patient relationship.

As a result of recent publicity given to the review process, great strides have been and are being made to improve the system even more. The development of a protocol to expedite complaints specifically related to fees will allow the full Committee to concentrate on medical practice complaints. Another improvement in the system was to assign Med-Chi staff with sole responsibility of the peer review process.

The Committee members and staff are devoted to this system and have sacrificed time from family and practice for the betterment of the medical profession. For this I, as Chairman, am sincerely grateful.

**LOIS E. WEHREN MD, Chairman**
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GERALD A. HOFKIN MD
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LEX B. SMITH MD
W. HADDOX SOTHORON MD
JAMES G. ZIMMERLY MD

## Physician Rehabilitation

*Mr. President and Members of the House of Delegates:*

The Committee on Physician Rehabilitation has continued to increase its activities in 1987. The number of reports to the Commission increased to 78, and the active caseload continued at about 90. There have been many presentations made by the staff and the Chairman to a variety of medical groups.

The March 1988 issue of the *Maryland Medical Journal* was devoted to the subject of physician rehabilitation. It featured anonymous stories by physicians who had been helped by the program.

Med Mutual Liability Insurance Society again contributed $25,000 to the Committee as support for our program. The Committee has proposed Council consider a full-time medical director for the program because of the increased caseload and number of reported physicians. Several states have done this, and many others are interested in doing so.

In closing, I extend my sincere appreciation to the members of this Committee and staff who have given their valuable time and services to these important issues.

EDWARD J. KITLOWSKI MD, Chairman
WILLIAM E. ABRAMSON MD
H. PATRICK ADAMS MD
ANDY BAER MD
CHARLES BEATTIE MD, PhD
HAZEL CHAMBERS
GEORGINA Y. GOODWIN MD
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ROBERT R. KENT MD
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Advisory Members
RICHARD H. ANDERSON MD
JOSEPH F. CHAMBERS MD
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MEL UDEL MD
CHARLES L. WHITFIELD MD

## Preventive Medicine and Public Health

*Mr. President and Members of the House of Delegates:*

1. The Subcommittee on Immunization and Infectious Diseases has taken action on the following:
   a. Reviewed an informational brochure on pertussis that is to be distributed by the Department of Health and Mental Hygiene.
   b. Reviewed guidelines, "Control Measures for Citrobacter Diversus Infections in Newborn Nurseries."
   c. Kept abreast of the activities of the Med-Chi Committee on AIDS and the Governor's Commission on AIDS through the Chairman.
   d. Reviewed the revisions to the "Recommended Schedule of Immunizations," which is to be distributed by the Department of Health and Mental Hygiene.
2. The Subcommittee on Infant, Child and Adolescent Health has:
   a. Discussed legislation for footprint identification of newborns.
   b. Reviewed available services for hospice care for children.
   c. Discussed school immunization records.

3. The Sports Medicine Subcommittee has acted on the following:
   a. Reviewed guidelines for support of state licensure of athletic trainers from Physical Therapists Association.
   b. Discussed the AMA's resolution of all terrain vehicles.
   c. Discussed plans for a newsletter to be directed to high school coaches from the subcommittee.

The Committee invited a representative from the AIDS Administration of the Department of Health and Mental Hygiene to discuss guidelines for physicians when dealing with suspected AIDS patients.

A scientific session of the Annual Meeting, cosponsored by the Committee and the Maryland Radiological Society, was held, "Imaging Assessment of Cranio-Cerebral Trauma: An Overview."

ANNELIES S. ZACHARY MD, CHAIRMAN
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IDO ADAMO MD

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J.C. ROBINSON MD
ABRAHAM SCHNEIDMUHL MD
RUTH SINGER MD
ANDREW WILEY MD

## Professional Ethics

*Mr. President and Members of the House of Delegates:*

The Committee on Professional Ethics continued to develop and revise opinions dealing with a variety of patient care issues. The Committee developed new opinions on Treatment of Contagious Patients, Sale or Closing of a Medical Practice, Fees for Assisting at Surgery, Ethical Relationship of Treating Physician to Patient Involved in Litigation, Second Surgical Opinion, Medical Record Requests Involving Alternative Delivery Systems, and Physician Dispensing. The Committee revised opinions concerning Tissue and Organ Banking, Referrals and Consultations, Physician Responsibility for Advertising, Health Care Facility Ownership, and Referrals Between Physician Spouses.

The Committee also cosponsored with the Committee on Medicine and Religion an educational program in April on "Hippocrates and Euthanasia."

The Committee will be assuming the duty formerly carried out by the Physician/Patient Relations Committee of approving professional corporation names.

LOUIS C. BRESCHI MD, Chairman
BETH L. ARONSON MD
EDILBERTO BELTRAN MD
VINCENT O. CASIBANG MD
JACK C. CHILDERS MD
FRANCISCO CORREA-PAZ MD
DEOGRACIAS FAUSTINO MD
JOSEPH R. GLADUE MD
EDWARD J. GOLDMAN MD
EUGENE GUAZZO MD
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LESLIE R. MILES, Jr., MD
RIVA E. NOVEY MD
BENJAMIN ROTHFELD MD
FRANK E. SCHUSTER MD
RONALD J. TAYLOR MD

## Professional Review Organization Monitoring

*Mr. President and Members of the House of Delegates:*

The PRO Monitoring Committee exercised its responsibilities by maintaining close liaison with the federally designated Professional Review Organization, the Delmarva Foundation for Medical Care, Inc. Faculty members should clearly understand that Med-Chi has no review power nor legal authority over the PRO, but does maintain a good working relationship with the Delmarva Foundation.

Many physicians expressed their individual concerns regarding PRO review actions, particularly with respect to denial of hospital stays and overall communication problems. Individual complaints received are summarized as follows: criteria for continued stay is too narrow; specific circumstances involving acute care are overlooked by reviewers; reason and frequency of ordering labortory tests are questioned inappropriately. Quality review remains a major concern. In many cases, the PRO raised questions as to why certain tests were not ordered.

To accurately measure and quantify physician complaints regarding the PRO on as statewide basis, a survey was developed and published in the Maryland Medical Journal. The results of the survey are being refined at this time, but many respondents reported a significant untimely response to appeals of PRO actions and also reported deleterious effects on physician/patient relationships. These and other issues will be continually addressed with the PRO.

It is noted that retrospective reviews are triggered following reimbursement of the bill by the Medicare carrier. According to Delmarva the fact that most claims are paid after three months following discharge causes the delay in retrospective reviews frequently objected to by physicians. The high number of retrospective denials in Maryland is attributable to concern within the Health Care Financing Administration that because this state is not under a DRG system, it allegedly has one of the highest length-of-stay rates in the country.

This Committee has emphasized to the PRO that denials and reconsiderations must be determined by qualified physician reviewers with necessary and complete medical documentaion. In another area, the Committee is exploring the situation where under federal regulations, the Professional Review Organization is prohibited from notifying the Maryland Board of Physician Quality Assurance directly should it identify a physician who was providing substandard care. The Committee will work toward establishing an appropriate liaison between the Professional Review Organization and the Maryland disciplinary organization should a physician practicing substandard care be identified.

The Delmarva Foundation for Medical Care, Inc. has been cooperative in responding to many physician complaints received by this Committee and referred to Delmarva for clarification.

I wish to take this opportunity to thank R. Lane Wroth MD, Medical Director; Linda Clark, Executive Director; and Jean Murphy, Vice President for Review for their availability and cooperation.

Additionally, I thank the members of this Committee for their valuable expertise and committment to this work on behalf of all members of the Medical and Chirurgical Faculty of Maryland.

**JOHN A. SINGER MD, Chariman**
**PETER E. DANS MD**
**AUGUSTO R. DE LEON MD**
**BYRON S. HURWITZ MD**
**DAVID S. McHOLD MD**
**KARL F. MECH, Jr., MD**
**RICHARD T. SCHOLZ MD**
**KARL H. WEAVER MD**

## Public Relations

*Mr. President and Members of the House of Delegates:*

The Public Relations Committee was extremely active during the past year and successfully implemented the 1987-88 long-range public relations plan.

On July 1, 1987 the Faculty signed a one-year contract with WBAL-AM Radio in Baltimore to air "Consultation," the one-hour radio talk program coordinated by the Public Relations Committee. The program is broadcast every Thursday evening from 8 to 9 p.m. Program topics and speakers are scheduled in cooperation with the Baltimore City Medical Society and the Baltimore County Medical Association. Some subjects discussed on the program this year included eating disorders, AIDS, menopause, and the pros and cons of HMOs.

In September 1987 a Logo/Name Change Subcommittee of the Public Relations Committee was created to evaluate Med-Chi's current title and seal. The Subcommittee surveyed the membership in the March 1988 issue of the *Maryland Medical Journal*, questioning members on the association's name as well as possible ideas for a new logo design. Survey responses were returned in late April and are being evaluated. The Subcommittee was created by the Public Relations Committee to strengthen and update the Faculty's image.

In January 1988 the Committee developed its First Annual Citizenship Award for outstanding community service by nonhealth professionals. The Award was designed to recognize achievements above and beyond the call of duty that have improved the quality of life within the community. One Award will be given annually, and component societies will nominate one individual for the Award. A Citizenship Award Subcommittee will review all entries and submit its recommendations to the Public Relations Committee for final approval. The nominee selected as the most outstanding will receive a plaque at Med-Chi's Semiannual Meeting. Through this program, the Public Relations Committee hopes to enhance the image of physicians in the eyes of the public and to stimulate individual involvement within local communities.

To celebrate Doctors' Day on March 30, Med-Chi's Auxiliary and Public Relations Committee presented the Johns Hopkins School of Medicine, the University of Maryland School of Medicine, and the Faculty with promotional stamp plates to be inserted into the organizations' mail machines. The stamp plates bear a red carnation (the official symbol of Doctors' Day) and can be used each year throughout the month of March to help commemorate the event.

The Editorial Board of the *Maryland Medical Journal* and the Public Relations Committee cooperated in sponsoring the Eighth Annual Photo Contest. Faculty and Auxiliary members entered a total of 30 photos in both the color and black-and-white categories, which were on display during the Annual Meeting.

Dr. Lawrence Rubin and Mrs. Erma Hirschfeld, first place winners of last year's competition, served as chairmen of the contest. Judges were Mr. Thomas Beck, photocurator for the University of Baltimore, and Mrs. Albert Nahum, a free-lance photographer and artist. First and second prizes this year were gift certificates from The Camera Shop. Names of the winners were announced during the House of Delegates Session of the Annual Meeting. The first place winner in the color category was Michael Liteanu MD, and second place went to Jerrold Post MD. The first place winner in the black-and-white category was Mohommad Inayatullah MD, and second place went to William Goodman MD.

Certificates of Recognition were presented during the House of Delegates Session of the Annual Meeting to three physicians for their outstanding service and dedication as chairmen of Med-Chi committees. The Certificates were presented by the President on behalf of the Public Relations Committee, with thanks from the entire membership of the Medical and Chirurgical Faculty. Certificates went to the following Chairmen: Dr. Leonard Lichtenfeld, Co-Chairman of the Legislative Committee; Dr. Victor Hrehorovich, Chairman of the Committee on Hospital Medical Staffs; and Dr. Gerry Oster, Chairman of the Committee on Computers in Medicine.

This year, over 4,700 new medical student members were recruited to the AMA during the 1987 Medical Student Outreach Program by 90 student members, making it the most successful program in its three-year history. Daniel Paoli of the University of Maryland School of Medicine recruited 27 of those new members, and was presented with a plaque from the AMA for his outstanding achievements. The Public Relations Committee further recognized Mr. Paoli's efforts by presenting John M. Dennis MD, Dean of the University of Maryland School of Medicine, with the AMA-

MSS Membership Recruitment Award. The award was presented by the President during the House of Delegates Session of the Annual Meeting.

The Public Relations Committee joined with the Committee on AIDS, the Maryland Academy of Family Physicians and the Maryland Chapter of the American Academy of Pediatrics to sponsor an educational session at the Annual Meeting entitled "AIDS: Perinatal and Adolescent." The session focused on the immediate and future problems of AIDS regarding its transmission, diagnosis, and treatment. The broad base of expertise on the panel included John P. Johnson MD, Department of Immunology,

University of Maryland at Baltimore; Gerri Robinson MD, Social Services Division; and Robert Ancona MD, Pediatrician.

Other projects completed this year by the Public Relations Committee and staff include the monthly distribution of health tips to radio stations throughout the state; the weekly circulation of an in-house newsletter, "Housecalls," to all Med-Chi staff members; and monthly distribution of health-related articles from the *Washington Post* and the *Baltimore Sun* to members of the Med-Chi Executive Committee and staff. The Committee also compiled a roster of physician speakers and topics to respond to requests from the public and the media.

**JAMES E. BELL MD, Chairman**
**GEORGE A. ABESHOUSE MD**
**ORHAN H. AYDINEL MD**
**ELLIOTT M. BERG MD**
**MARK T. BIRNS MD**
**WILLIAM A. CASSIDY MD**
**ANAND M. DHANDA MD**
**ALLEN W. DITTO MD**
**K. G. DRITSAS MD**
**WILLIAM J. DUNSEATH MD**
**WILLIAM DVORINE MD**
**JYOTHI GADDE MD**
**ANTONIO GALINDO MD**
**ALFONSO H. JANOSKI MD**
**WILLIAM KORMAN MD**
**FRED MAGAZINER DDS**
**MARK E. MAUSNER MD**
**HIROSHI NAKAZAWA MD**
**MUSTAFA ONAL MD**
**EUGENE H. OWENS MD**
**GARY W. PUSHKIN MD**
**IBRAHIM A. RAZZAK MD**
**GHOLAM R. SADJADI MD**
**MARGARET T. SNOW MD**
**STEPHEN G. SPURR MD**
**MILDRED TAYLOR**
**THERESA M. VOGEL MD**
**JEFFREY M. ZALE MD**

## Scientific Activity

*Mr. President and Members of the House of Delegates:*

The 1987 Semiannual Meeting was held in Maui, Waikiki, and San Francisco, January 26-February 7, 1988. This marked not only the first time the meeting was held in Hawaii and San Francisco but also the first time the meeting was held in the winter. The 133 attendees rated the 23 CME credits offered during the scientific sessions highly. Contributors to the sessions included speakers from the University of Hawaii, San Francisco General Hospital, and the UCLA School of Medicine. A number of optional tours offered in Maui and Waikiki were enjoyed by the participants.

The 1988 Annual Meeting was held in the new Exhibit Hall E of the Baltimore Convention Center, April 27-29. Once again specialty societies were urged to collaborate in order to increase attendance. This proved to be a positive approach.

The 1988 Annual Meeting combined new ideas with some old ones. To emphasize the importance of physician involvement in the legislative process, John Kitzhaber MD, President of the Oregon State Senate, was the Keynote Speaker at the Plenary Session. Dr. Kitzhaber's talk, "The Physician's Role in the Emerging Public Health Debate" drew a crowd of 160 on Wednesday afternoon.

That evening, the Maryland Medical Political Action Committee presented the Capitol Steps performing at a cabaret. These brilliant satirists presented their views on topics ranging from the Baltimore Orioles to Russian "glasnost." A hot buffet was served to over 250 physicians, legislators, and spouses.

Since the complimentary lunch served in the Exhibit Hall was so well received last year, it was offered again in 1988. This was done to urge the physicians to visit the exhibit booths. The quality of the food was much improved since only three complaints were received about food.

An audience of 52 attended the Prayer Breakfast at 7:15 on Thursday morning. Even though the attendance was lower than last year, participants enjoyed Dr. Theodore E. Woodward's presentation "Religion and Medicine: A Centuries Old Relationship."

There were fourteen tables at the Lunch and Learn sessions on Thursday afternoon; most were sold out, and few people were turned away. A total of 15 Category I CME credits were offered at the Annual Meeting.

To continue a policy initiated last year, all the Past Presidents and their spouses/guests were given complimentary tickets to the Presidential Banquet. There were 10 Past Presidents in attendance. The Presidential Banquet, honoring Leon E. Kassel MD, featured a gourmet meal and dancing to the music of Zim Zemarel. As part of the evening's activities, Dr. Kassel made several presentations: first, a special presentation of roses and a Med-Chi watch to Mrs. Mary McGibbon in recognition of her retirement after 14 years of service to the Med-Chi Faculty. In addition, Dr. Kassel presented a Past-President's plaque to Donald T. Lewers MD in recognition of his service, and President-

Elect Michael R. Dobridge MD, presented Dr. Kassel with a Past-President's plaque.

Annual Meeting attendance remained steady at approximately 1,000 physicians, 38 other health providers (nurses, technicians, etc.) 382 exhibitors, and 131 speakers. Comments on attendees' evaluation forms praised the scientific sessions and the meeting in general; however, the negative comments centered on the difficulty in finding convenient parking. A few comments concerned returning to Hunt Valley. We are still in contact with Hunt Valley, but they have indicated we do not use enough sleeping rooms to justify the amount of space used for the Annual Meeting.

The next Semiannual Meeting will be held at the Princess Southampton, Bermuda, September 14-18, 1988.

Forty-three requests from various organizations were approved for cosponsorship by the Faculty for Category I CME credits. Eleven practice management workshops were offered for physicians and office staff during 1987.

The Committee on Scientific Activity appreciates the assistance given to make this a successful year and wishes to thank the many individuals who gave of their time and effort.

**JOHN M. KRAGER MD, Chairman**
**GARY L. ROSENBERG MD**
**JACK ZIMMERMAN MD**
**ERNEST HARMON MD**
**JOSE MARTINEZ MD**
**JOHN R. LILLY MD**
**MS PATRICIA MUNOZ, Director of Meeting Services**
**MISS JOANN CIRILLO, Assistant, Meeting Services**

## Small Area Practice Variations

*Mr. President and Members of the House of Delegates:*

The Committee on Small Area Practice Variations has monitored several studies measuring area-to-area variations in the utilization of medical services. The Faculty actively participated in an ongoing study involving statewide variations in coronary artery bypass surgery (CABS) with the Office of Policy Analysis and Program Evaluation of the Department of Health and Mental Hygiene and the Maryland Hospital Association. Other areas of activity include a Health Department study of "medical practice pattern analysis to measure utilization of hospital services by vulnerable populations," and a current study involving statewide variations in caesarean section rates undertaken by the Maryland Hospital Association. This Committee did involve the Obstetrical and Gynecological Society of Maryland in the caesarean section study so that it will have the opportunity to evaluate the data and to provide input on variations in the utilization of this particular procedure. Wherever possible, it is our intention to involve individual physicians, appropriate medical and specialty societies, and hospital medical staffs so that physicians will be able to evaluate all aspects of variations in medical practice.

We are pleased to report that the House of Delegates established the Committee on Small Area Practice Variations as a standing Committee of the Faculty in April 1988. Plans for the future include an issue of the *Maryland Medical Journal* devoted to small area practice variations in Maryland. As Chairman, I wish to extend my appreciation to each member of the Committee for his valuable time and experience in this area of Faculty activity.

**PETER E. DANS MD, Chairman**
**GUNTHER D. HIRSCH MD**
**HARRY G. RANDALL MD**
**LEONARD SCHERLIS MD**
**KARL H. WEAVER MD**
**JACK M. ZIMMERMAN MD**

## Specialty Designation

*Mr. President and Members of the House of Delegates:*

The Committee on Specialty Designation has held five meetings to plan and implement the mandated specialist identification authority of the Board of Medical Examiners. This Committee functions as the reviewing body for the Board on applications received from physicians requesting designation in a particular medical specialty.

Application for specialty designation is open to all licensed physicians in Maryland. If a physician is certified by the American Board of Medical Specialists, the identification is automatically given by the Board upon confirmation of that credential.

If not certified by the American Board of Medical Specialists, the physician must complete an application outlining specific training and experience in the requested specialty. The Applications are referred by the Board to this Committee for evaluation and recommendation to the Board. Criteria used for such evaluation was developed jointly by Med-Chi and the Board and is set forth in administrative regulations (COMAR 10.32.08), which have the force and effect of the law. The Board makes the final decision on the basis of recommendations from the Committee. The identification is permanent, and the physician may publicize himself or herself in the given area of specialty.

Much time and effort has been exercised in reviewing approximately 1000 applications received thus far. Each application is reviewed thoroughly and fairly, and in strict compliance with required criteria.

I thank each member of the Committee for his patience in carrying out this mandated function.

**JOSEPH I. BERMAN MD, Chairman**
**ARISTIDES C. ALEVIZATOS MD**
**SAMUEL D. FRIEDEL MD**
**B. MARTIN MIDDLETON MD**
**JOSE M. YOSUICO MD**
**DAVID ZAJANO MD**

## Tel-Med

*Mr. President and Members of the House of Delegates:*

Maryland Tel-Med is part of a nationwide network of 350 telephone information programs throughout the United States, Canada, South America, and Saudi Arabia. Tel-Med, Inc., is a wholly owned subsidiary of the San Bernardino, California, County Medical Society. The Medical and Chirurgical Faculty of Maryland is the Statewide Coordinator of six operating programs in Maryland. The Faculty helps new programs begin operation, reviews and develops scripts for the Maryland Master Library, and in cooperation with Blue Cross and Blue Shield of Maryland assists in funding local programs.

Over the past year, Med-Chi and Blue Cross and Blue Shield developed a statewide brochure for all Maryland Tel-Med Programs. The brochures are in use, and the standard design gives Tel-Med an increased level of recognition throughout the state.

The daily activities of Tel-Med, including newsletter publication, script development and revision, and new program development, are conducted by Caroline Harman, Maryland Tel-Med statewide coordinator and Med-Chi staff member. All contributions to the Maryland Tel-Med Program are received by the Medical and Chirurgical Charitable Fund, Inc. and are tax deductible. Inquiries about the program should be directed to Maryland Tel-Med, 1211 Cathedral Street, Baltimore, MD 21201 or contact Caroline Harman at 301-539-0872.

**Maryland Tel-Med Programs:**

Anne Arundel General Hospital, Annapolis
Giant Food, Inc., Landover
Memorial Hospital, Easton
Peninsula General Hospital Medical Center, Salisbury
St. Mary's County Health Department, Leonardtown
Washington County Hospital Association, Hagerstown

## Young Physicians

*Mr. President and Members of the House of Delegates:*

The Committee held several meetings to develop programs and to encourage the active participation of young physicians in the Medical and Chirurgical Faculty of the State of Maryland and its component societies. By definition, young physicians are licensed physicians under the age of forty or in practice less then five years.

The defined goals of the Committee are to strengthen the Medical and Chirurgical Faculty through increased membership by young physicians. This shall be done by educating young physicians about organized medicine, the political process, and the many issues surrounding medicine at this time. As membership increases we hope to stimulate the involvement of young physicians in leadership roles at the component society and Medical and Chirurgical Faculty levels, thereby bringing the unique perspective of young physicians on medical, political, and socioeconomic issues to the medical society.

The Committee has developed a survey instrument designed to obtain demographic information to assess priorities of young physicians in Maryland. Additionally, the Council has approved funding to send a Maryland Delegate to the Young Physician Section of the American Medical Association. Through these activities, we plan to further develop young physician involvement and resolve to strengthen Med-Chi through increased membership and through new program initiatives.

**SUSAN OWENS MD, Chairman**
**JAMES A. D'ORTA MD**
**RANDY ELLIS MD**
**MARTIN G. GUERRERO MD**
**B. LARRY JENKINS, Jr., MD**
**STEPHEN R. KAY MD**
**STEVEN H. PEARLMAN MD**

## Treasurer

*Mr. President and Members of the House of Delegates:*

The financial books and records of the Medical and Chirurgical Faculty have been audited for the year ended December 31, 1987 by O'Dea and Labrador, Certified Public Accountants.

The financial reports reflecting the results of operations for the year 1987 and the financial position of the Faculty at year end are part of this report. The auditors have submitted an unqualified opinion that the financial statements are accurate and conform to generally accepted accounting principles.

The 1988 Budget was approved by Council in January and is presented in this report for your information.

The Faculty investment portfolio was reviewed and is part of the report of the Financial Committee.

**JOSE M. YOSUICO MD**
**Treasurer**

***O'Dea & Labrador***
*CERTIFIED PUBLIC ACCOUNTANTS*

133 Defense Highway
Annapolis, Maryland 21401
**841-5471**

28 W. Allegheny Avenue
Towson, Maryland 21204
**296-5880**

The Medical and Chirurgical Faculty
of the State of Maryland
Baltimore, Maryland

We have examined the balance sheet of The Medical and Chirurgical Faculty of the State of Maryland as of December 31, 1987 and 1986 and the related statements of income, expenditures and transfers, and changes in fund balances for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of The Medical and Chirurgical Faculty of the State of Maryland as of December 31, 1987 and 1986 and the results of its operations and the changes in its fund balances for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

O'Dea + Labrador

June 10, 1988
Towson, Maryland

# The Medical and Chirurgical Faculty of the State of Maryland

## Balance Sheet

| Assets | General Fund | Endowment and Special Funds | Plant Fund | Med-Chi Insurance Fund | Total December 31, 1987 | Total December 31, 1986 |
|---|---|---|---|---|---|---|
| **Current** | | | | | | |
| Cash | $3,823,906 | $ 809,723 | $ 11,851 | $1,523,126 | $ 6,168,606 | $ 4,352,053 |
| Accounts Receivable | | | | | | |
| Membership dues, journal and advertising | 103,772 | — | — | — | 103,772 | 65,247 |
| Other funds | 483,921 | — | — | — | 483,921 | 406,864 |
| Other | — | — | — | 54,590 | 54,590 | 342,072 |
| The Med-Chi Agency, Inc. | 64,344 | — | — | — | 64,344 | 129,167 |
| Loans receivable—plant fund | — | — | — | — | — | 500,000 |
| Prepaid expenses | 6,877 | — | — | — | 6,877 | 3,937 |
| | 4,482,820 | 809,723 | 11,851 | 1,577,716 | 6,882,110 | 5,799,340 |
| Marketable securities | — | 1,959,237 | — | — | 1,959,237 | 1,793,343 |
| Investment—The Med-Chi Agency, Inc. | 248,039 | — | — | — | 248,039 | 229,304 |
| Fixed | | | | | | |
| Land, buildings and improvements | 76,696 | — | 2,813,822 | — | 2,890,518 | 2,617,801 |
| Other | — | — | 373,719 | — | 373,719 | 458,747 |
| Other assets | 503,646 | 106,830 | — | — | 610,476 | 1,076,147 |
| | $5,311,201 | $2,875,790 | $3,199,392 | $1,577,716 | $12,964,099 | $11,974,682 |
| **Liabilities and Fund Balances** | | | | | | |
| **Current** | | | | | | |
| Accounts Payable | | | | | | |
| Trade | $ 32,631 | $ — | $ — | $1,079,179 | $ 1,111,810 | $ 437,849 |
| Other funds | 165,645 | 75,287 | 11,851 | 58,569 | 311,352 | 906,864 |
| Other | 52,782 | — | — | — | 52,782 | 18,696 |
| The Med-Chi Agency, Inc. | — | — | — | 103,632 | 103,632 | 62,594 |
| Component societies | 1,117,097 | — | — | — | 1,117,097 | 732,108 |
| Payroll taxes | 6,125 | — | — | — | 6,125 | 4,884 |
| Accrued expenses | 77,435 | — | — | — | 77,435 | 58,062 |
| Grants payable | 71,313 | — | — | — | 71,313 | 77,508 |
| Deferred income | 830,901 | — | — | — | 830,901 | 767,234 |
| Deferred compensation | — | 319,947 | — | — | 319,947 | 373,109 |
| Loans payable—general fund | — | — | — | — | — | — |
| | 2,353,929 | 395,234 | 11,851 | 1,241,380 | 4,002,394 | 3,438,908 |
| **Fund Balances** | | | | | | |
| Invested in fixed assets | — | — | 3,187,541 | — | 3,187,541 | 2,991,520 |
| Designated | | | | | | |
| Legal fund | 92,245 | — | — | — | 92,245 | 92,245 |
| Educational purpose | 30,823 | — | — | — | 30,823 | 27,151 |
| Other | 5,181 | — | — | — | 5,181 | 4,214 |
| Undesignated | 2,829,023 | 2,480,556 | — | 336,336 | 5,645,915 | 5,420,644 |
| | 2,957,272 | 2,480,556 | 3,187,541 | 336,336 | 8,961,705 | 8,535,774 |
| | $5,311,201 | $2,875,790 | $3,199,392 | $1,577,716 | $12,964,099 | $11,974,682 |

The accompanying notes to financial statements are an integral part of this statement.

## Exhibit B

### Statement of Income, Expenditures and Transfers General Fund (Undesignated)

| | For Years Ended December 31, 1987 | December 31, 1986 |
|---|---|---|
| **Income** | | |
| Dues | $1,169,964 | $1,162,495 |
| Rents and services | 22,465 | 20,731 |
| Meetings | 76,340 | 84,555 |
| Journal advertising and subscriptions | 152,189 | 134,076 |
| Interest | 185,149 | 154,978 |
| Miscellaneous | 236,943 | 186,659 |
| Equity interest in the Med-Chi Agency, Inc. | 268,734 | 204,956 |
| | 2,111,784 | 1,948,450 |
| **Expenditures** | | |
| Operating expenses | 2,073,721 | 1,805,008 |
| **Excess of income over expenditures** | 38,063 | 143,442 |
| **Transfers-Endowment and Special Funds** | | |
| From consolidated fund income | — | 5,654 |
| From special funds | — | — |
| From plant fund | — | — |
| | — | 5,654 |
| **Excess of income and transfers over expenditures** | $ 38,063 | $ 149,096 |

The accompanying notes to financial statements are an integral part of this statement.

## Exhibit C

### Statement of Income and Expenditures Med-Chi Insurance Fund

| | For Years Ended December 31, 1987 | December 31, 1986 |
|---|---|---|
| **Income** | | |
| Administrative fees | $ 46,811 | $ 44,362 |
| Interest | 99,152 | 81,925 |
| | 145,963 | 126,287 |
| **Expenditures** | | |
| Administrative services | 27,387 | 32,295 |
| Postage, printing and supplies | 33 | 108 |
| Rent | 960 | 960 |
| Telephone | 200 | 200 |
| Professional fees | — | 750 |
| Contributions | 100,000 | 905,000 |
| | 128,580 | 939,313 |
| **Excess (deficit) of income over expenditures** | $ 17,383 | $(813,026) |

The accompanying notes to financial statements are an integral part of this statement.

### Notes to Financial Statements December 31, 1987

#### Note 1—Summary of Significant Accounting Policies

The Medical and Chirurgical Faculty of the State of Maryland is a nonprofit organization, tax exempt under Section 501 of the Internal Revenue Code.

Marketable securities are carried at cost. Market values at December 31, 1987 and 1986 were $2,200,654 and $2,211,167, respectively.

The Faculty carries its investment in the 100% owned The Med-Chi Agency, Inc. at equity. The net assets of the corporation as of December 31, 1987 and 1986 were as follows:

| | 1987 | 1986 |
|---|---|---|
| Current assets | $329,541 | $420,459 |
| Fixed assets—net | 13,470 | 5,229 |
| | 343,011 | 425,688 |
| Current liabilities | 94,972 | 196,384 |
| | $248,039 | $229,304 |

Fixed assets of the plant fund, other than personal property, are recorded at cost. Portraits were appraised as of December 31, 1963 at $65,000, an increase of $51,000 over prior years. All other personal property was appraised as of December 31, 1949. Depreciation on fixed assets is not provided. A schedule of fixed assets follows:

| | 1987 | 1986 |
|---|---|---|
| **Real Estate** | | |
| 1209-1215 Cathedral Street | | |
| Land and building | $ 110,636 | $ 110,636 |
| Improvements | 347,014 | 347,014 |
| 1205-1207 Cathedral Street and 1204 Maryland Avenue | | |
| Land and buildings | 1,997,215 | 1,997,215 |
| Improvements | 358,957 | 162,936 |
| | 2,356,172 | 2,617,801 |
| **Other** | | |
| Library books, journals | 231,370 | 231,370 |
| Office and library—fixtures, antiques and museum pieces | 77,349 | 77,349 |
| Portraits—appraised value | 65,000 | 65,000 |
| | 373,719 | 373,719 |
| | $3,187,541 | $2,991,520 |

Fixed assets of the general fund are recorded at cost and depreciated using the straight-line method over their estimated useful lives for assets acquired prior to 1981, using the accelerated cost recovery system for assets acquired after 1980 and the modified accelerated cost recovery system for those acquired after 1986.

| | December 31, 1987 | December 31, 1986 | Life in Years |
|---|---|---|---|
| Auto equipment | $ 32,000 | $ 15,700 | 3 |
| Office equipment | 231,435 | 271,325 | 5–10 |
| Total cost | 263,435 | 287,025 | |
| Less—accumulated depreciation | 186,739 | 201,997 | |
| | $ 76,696 | $ 85,028 | |

Provision for depreciation charged to operations for the years ended December 31, 1987 and 1986 was $51,714 and $44,567, respectively.

## Statement of Changes in Fund Balances for Year Ended December 31, 1987

| | Balance January 1, 1987 | Additions: Excess of Income over Expenditures and Transfers | Additions: Investment Income | Additions: Interest on Savings Accounts | Additions: Other Income and Contributions Received | Additions: Gain on Sale of Securities | Deductions: Transfers In (Out) | Deductions: Expenditures | Balance December 31, 1987 |
|---|---|---|---|---|---|---|---|---|---|
| General Fund | | | | | | | | | |
| Designated | $ 123,610 | $ — | $ — | $ — | $ 4,639 | $ — | $ — | $ — | $ 128,249 |
| Undesignated | 2,790,960 | 38,063 | — | — | — | — | — | — | 2,829,023 |
| Endowment and Special Funds | 2,310,730 | — | 128,662 | — | — | 165,893 | — | 124,729 | 2,480,556 |
| Plant Fund | 2,991,520 | — | — | — | — | — | 196,021 | — | 3,187,541 |
| Med-Chi Insurance Fund | 318,954 | 17,382 | — | — | — | — | — | — | 336,336 |
| | $8,535,774 | $ 55,445 | $128,662 | — | $ 4,639 | $165,893 | $196,021 | $124,729 | $8,961,705 |

## For Year Ended December 31, 1986

| | Balance January 1, 1987 | Additions: Excess of Income over Expenditures and Transfers | Additions: Investment Income | Additions: Interest on Savings Accounts | Additions: Other Income and Contributions Received | Additions: Gain on Sale of Securities | Deductions: Transfers In (Out) | Deductions: Expenditures | Balance December 31, 1986 |
|---|---|---|---|---|---|---|---|---|---|
| General Fund | | | | | | | | | |
| Designated | $ 150,889 | $ — | $ — | $ — | $ 28,183 | $ — | $ — | $ 55,462 | $ 123,610 |
| Undesignated | 2,641,864 | 149,096 | — | — | — | — | — | — | 2,790,960 |
| Endowment and Special Funds | 2,025,774 | — | 103,209 | 16,236 | 6,424 | 239,869 | (5,654) | 75,128 | 2,310,730 |
| Plant Fund | 1,943,943 | — | — | 4,504 | 1,043,073 | — | — | — | 2,991,520 |
| Med-Chi Insurance Fund | 631,980 | (313,026) | — | — | — | — | — | — | 318,954 |
| | $7,394,450 | $(163,930) | $103,209 | $20,740 | $1,077,680 | $239,869 | $(5,654) | $130,590 | $8,535,774 |

The accompanying notes to financial statements are an integral part of this statement.

### Note 2—Pension Plan

The Faculty has a noncontributory pension plan covering substantially all its employees. Pension contributions for the current year and prior year were $61,295 and $55,289 respectively, which includes amortization of prior accrued. Actuarial determined pension costs are funded on an annual basis by the Frozen Initial Liability method with initial accrued liabilities computed under the Entry Age Normal Cost method. A comparison of accumulated plan benefits and plan net assets for the Faculty is presented below:

| Acturial Present Value of Accumulative Plan Benefits | 1987 | 1986 |
|---|---|---|
| Vested | $730,298 | $ 610,895 |
| Nonvested | 121,276 | 365,501 |
| | $851,574 | $ 976,396 |
| Net assets available for benefits | $941,334 | $1,295,590 |

The assumed rate of return used in determining the acturial present value of accumulated plan benefits was 6.5% for both 1987 and 1986. The fund's assets as of April 1, 1987 and April 1, 1986 exceeded the vested benefits by $211,036 and $684,695, respectively.

### Note 3—Related Parties

The Medical and Chirurgical Faculty of the State of Maryland owns the stock of The Med-Chi Agency, Inc. The Faculty leases office space to the Agency under a month-to-month lease. Lease payments from the Agency were $14,003 and $10,320 for 1987 and 1986, respectively. Additionally, the Faculty performed certain management and accounting services for the Agency; income for these services was $100,000 in 1987 and $80,000 in 1986.

### Note 4—Other Assets

The Faculty has deposits in several savings and loan associations under control of the Maryland Deposit Insurance Fund (MDIF). Availability of these funds is controlled by the state agency and the funds are not considered current for this fiscal period.

## PROPOSED BUDGET: Estimated Income

| | Budget 1987 | Projected Actual Thru Dec. 31,1987 | Budget 1988 |
|---|---|---|---|
| Membership Dues | $1,170,000 | $1,170,000 | $1,170,000 |
| Investment Income | 350,000 | 420,000 | 500,00 |
| Medical Journal | 170,000 | 150,000 | 170,000 |
| Annual & Semiannual Meetings | 70,000 | 66,000 | 80,000 |
| Administrative Services | 110,000 | 150,000 | 120,000 |
| Other Income | 40,000 | 43,000 | 50,000 |
| Total | $1,910,000 | $2,005,000 | $2,090,000 |

### Estimated Expenditures

| | Budget 1987 | Projected Actual Thru 1987 | Budget 1988 | |
|---|---|---|---|---|
| Auditing | $7,200 | $7,200 | $7,200 | |
| Legal | 7,000 | 9,000 | 7,000 | |
| Contributions | 1,000 | 300 | 1,000 | |
| Gas/Electric/Water | 32,000 | 55000 | 55,000 | A* |
| Telephone/Telegraph | 34,000 | 30,000 | 35,000 | |
| Postage | 55,000 | 51,000 | 55,000 | |
| Household/Janitorial | 14,000 | 20,000 | 10,000 | |
| Property Maintenance | 12,000 | 12,000 | 10,000 | |
| Insurance | 14,000 | 30,000 | 30,000 | |
| New Equipment | 15,000 | 10,000 | 6,000 | |
| Equipment Maintenance | 2,000 | 3,500 | 4,000 | |
| Stationery/Supplies | 21,000 | 23,000 | 23,000 | |
| Salaries | 916,000 | 971,000 | 1,094,700 | |
| Social Security | 61,000 | 65,000 | 75,000 | |
| Unemployment Compenastion | 10,000 | 5,000 | 6,000 | |
| Employees' Insurance Program | 2,000 | 60,000 | 70,000 | |
| Employees' Pension | 70,000 | 73,000 | 85,000 | |
| Supplementary Hours | 9,000 | 10,000 | 10,000 | |
| Travel | 80,000 | 80,000 | 80,000 | B* |
| Printing | 29,000 | 30,000 | 25,000 | C* |
| Data Processing | 21,000 | 10,000 | 10,000 | |
| Government Relations | 40,000 | 50,000 | 50,000 | D* |
| Library | 20,000 | 20,000 | 20,000 | E* |
| Journal Expense | 1,000 | 150,000 | 150,000 | |
| Annual & Semiannual Meetings | 35,000 | 103,500 | 105,000 | F* |
| Presidential Fund | 16,0000 | 10,000 | 10,000 | |
| Auxiliary | 100,000 | 1,000 | 1,000 | |
| Miscellaneous Expense | 10,000 | 40,000 | 20,000 | |
| Depreciation | 48,000 | 60,000 | 60,000 | |
| Public Relations | $55,000 | $8,6000 | $5,000 | |
| Total | $1,951,200 | $1,999,000 | $2,119,900 | |

* see budget notes

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A. CONTRIBUTIONS:
- Reflects a reserve for possible requests during the year.

B. TRAVEL:
- Includes attendance at the following meetings:
- Regional Legislative Conference - January.
- National Medical Leadership Conference, Chicago; Presidents, President-Elect, Council Chairman, two staff members February.
- Six Delegates, Six Alternates, President, President-Elect, and staff to attend:
  1. AMA Annual Meeting, Chicago - June.
  2. AMA Interim Meeting, Dallas - December.
- Medical Society Executive Conference, in conjunction with the above.
- American Society of Association Executives,
- Annual Meeting or similar education activity.
- AAMSE (American Association of Medical Society Executives)
- Travel throughout the state for various component society meetings, other business and activities, as well as out of state
- Regional and National Sessions as determined on an individual basis.

C. PRINTING:
- Includes the net publication cost of the membership directory.

D. GOVERNMENT RELATIONS:
- Includes nurses' salaries and supplies for First Aid Room, Annapolis office, publications printing, mailing costs and travel.

E. LIBRARY:
- Includes Memberships, Travel, Supplies, Equipment, Xeroxing, Postage and Miscellaneous Library expenditures. Library salaries are in the salary account. Journal subscriptions, books, binding, etc. are purchased by designated funds and are not included in this item.

F. ANNUAL & SEMI-ANNUAL MEETING EXPENSES:
- New expenditure items of over $5,000 for these meetings (exclusive of pass-through items) to be approved by Executive Committee or Council. Arrangements and costs for Presidential Banquet and other social evants, to be cleared by Executive Committee.

# PHYSICIANS

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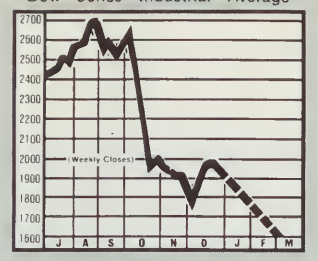
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# Doctors take Note

### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987-1988. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Sep 8-10 Intensive Training in Spirometry Testing,** Tremont Plaza, Baltimore; sponsored by the Dept of Environmental Health Sciences. Fee: $450; limited to 20 registrants. Info: C. Walsh 301-955-2609.

**Sep 15-16 Pediatrics for the Practitioner, Update '88.** Fee: physicians $200, nurses/practitioners, & retired physicians $135; 14.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Sep 23 Diabetic Retinopathy in 1988.** Fee: $200, $100 (those in training); 8 AMA Cat I credits. Info: D. Heydinger 301-955 2959.

**Sep 27 The Economic Impact of AIDS.** Fee: $75. Info: P. Macedonia 301-955-2959.

**Oct 6-8 Fourteenth Annual Topics in Gastroenterology and Liver Disease.** Fee: physicians $370; residents & fellows $185 (with letter verifying status); 20.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Oct 10-14 Thirtieth Annual Emil Novak Memorial Course: Gynecology, Gynecological Pathology, Endocrinology, and High-risk Obstetrics.** Fee: $550 ($400 for residents); 41 AMA Cat I credits. Info: C. Kearney 301-955-2959.

**Nov 4 Management of Complicated Retinal Detachments.** Fee $175 ($90 those in training); AMA Cat I credit. Info: D. Heydinger 301-955-2959.

**Dec 8-10 First Annual Wilmer Institute Current Concepts in Ophthalmology.** Fee: $250, $200 (those in training); AMA Cat I credit. Info: D. Heydinger 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Filmer Eye Institute, Baltimore. Info: C. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: C. Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer 8/8-12, 11/14-18. Fee: $460; AMA Cat I credits.

**Advanced Practicum in Ultrasound** 12/5-9. Fee: $460; 40 AMA Cat I credits.

**Visiting Physicians** - offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. Fee: $460; 40 AMA Cat I credits.

**Johns Hopkins Medical Grand Rounds** - Accredited audiovisual continuing education series of case discussion for clinicians; 30 topics/year in 5 bimonthly programs. Individual and groups subscriptions; 40 AMA Cat I credtis. Info: 301-955-3988.

### University of Maryland School of Medicine

**CME Courses:** For each course additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 300, Medical School Teaching Facility (MSTF), 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**Sep 16-17 Topics in Geriatrics,** The Royce Hotel at BWI International Airport, Linthicum. Fee and credits TBA.

**Sep 22 Dean's Conference #1: Dermatology,** UMBC, MSTF, Baltimore. Fee: $25; 6 AMA Cat I credits.

**Sep 23 Current Concepts in Ophthalmology: Eighth Annual Clinical Conference,** Hyatt Regency Baltimore. Fee: $60; 6 AMA Cat I credits.

**Oct 14-15 Roots of Creativity: The Study of Creative Imagination in Infancy,** Omni International Hotel, Baltimore. Fee: TBA; 10+ AMA Cat I credits.

**Oct 20 Dean's Conference #2: AIDS,** UMBC, MSTF Auditorium. Fee: $25; 6 AMA Cat I credits.

**Oct 27-29 Fourth Annual University of Maryland Contact Lens Symposium,** Hyatt Regency Inner Harbor, Baltimore. Fee: $160; 12.25 AMA Cat I credits.

**Nov 4-5 Second Medical Perioperative Management Postgraduate Course,** Harbor Court Hotel, Baltimore. Fee: $165; approx 10 AMA Cat I credits.

**Nov 5 A Brief Course in Brief Psychotherapy,** UMBC. Fee: $100; approx 6 AMA Cat I credits.

**Nov 16 Dean's Conference #3: Surgery,** UMBC. Fee: $25; 6 AMA Cat I credits.

**Dec 1-3 Eleventh National Trauma Symposium,** Baltimore Convention Center. Info: K. Unitas, MIEMSS, 301-328-2399.

**Visiting Professor Program** - Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee is charged. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct all inquiries to CME, 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour AMA Cat I credits available. Brochure available.

**Advanced Trauma Life Support Provider/Instructor Programs** sponsored by University of Maryland/MIEMSS. Fee: $350-500; 16-22 CME Cat I credits. Info: Melody Nelson 301-328-2919.

**Aug 18-19 - Provider**
**Sep 14-16 - Instructor**
**Oct 13-14 - Provider**
**Nov 16-17 - Provider**
**Dec 15-16 - Provider**

### Miscellaneous Meetings

**Temple University School of Medicine** sponsors a series of weekend summer conferences to be held at Timberline Four Seasons Resort in Canaan Valley WV; 9 Cat I credits. Regis & info: KI. Saumure 215-387-3685.

**Aug 12-14 Physician Update on Cancer, AIDS, and Liver Disease**

**Aug 19-21 Advances in Cardiology**

**Aug 26-28 Lasers in Medical Practice**

**Sep 9-11 New Antibiotics for Life-Threatening Infections**

**Sep 16-18 Interventional Radiology**

**Sep 17-19 American Society for Reconstructive Microsurgery Fourth Annual Meeting,** Lord Baltimore Hotel, Baltimore, MD. Fee: active members $325, associate & corresponding members $175, nonmembers $325, residents & fellows $175. Info: ASRM, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.

**Sep 23 Professional Rehabilitation: Intervention and Treatment,** sponsored by Med-Chi in cooperation with the Health and Education Council, at the Marriott Hunt Valley Inn, Hunt Valley, MD. Fee: early registration $100, after Sep 2 $110; 6.5 CME Cat I credits. Info: Don Neilenson 301-686-3610 or JoAnn Cirillo 1-800-492-1056 or 301-539-0872.

**Sep 24 Physicians' Cholesterol Education Program,** The Annapolis Ramada, 173 Jennifer Rd., Annapolis, MD. Info: 301-685-7074 or 225-5891.

**Sep 29-30 American College of Nuclear Physicians & Society of Nuclear Medicine Joint Symposium on Biology of Radionuclide Therapy,** Loews L'enfant Plaza Hotel, Washington, DC. Fees by Sep 6, members $195, nonmembers $215, technologists (members) $75, technologists (nonmembers) $105; thereafter: members $215, nonmembers $235, technologists (members) $95, technologists (nonmembers) $125. Info: G.S. Dikeos, ACNP, 1101 Connecticut Ave. NW - Ste 700, Washington, DC 20036 (202-857-1135).

**Oct 3-5 NIH Consensus Development Conference: Urinary Incontinence in Adults,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852.

**Oct 22 The Second Annual John C. Dumler OB/GYN Update,** St. Agnes Hospital, Baltimore, MD. Sponsored by the Depts of OB/GYN at St. Agnes Hospital and University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Oct 26 Physicians' Cholesterol Education Program,** The Ramada Inn, 901 Dual Highway, Hagerstown, MD. Info: 301-685-7074 or 225-5891.

**Nov 9-11 First National Cholesterol Conference,** Hyatt Regency Crystal City, Arlington, VA. Advance registration $150; conference participation limited to first 1,000 registrants. Info: The National Cholesterol Conference, 4733 Bethesda Ave. - Ste 530, Bethesda, MD 20814 (301-951-3275).

**Nov 12-13 Fetal Cardiology,** Key Bridge Marriott, Arlington, VA, sponsored by the Div of Pediatric Cardiology, University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Nov 19-20 Regional Review Course in Hand Surgery,** Washington, DC. Fee: physicians $200, residents, fellows, & allied health professionals $100; 12 AMA Cat I credits. Info: American Society for Surgery of the Hand, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.


**PHYSICIAN PLACEMENT SERVICE**

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

*Journal* announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.


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Physicians who have not recieved the renewal application by the second week in August should contact the Board to get the information necessary for renewal before their licenses expire on September 30, 1988. It is the physicians' responsibility, by law, to communicate with the Board concerning renewal of their licenses if, for some reason, they do not receive the renewal application.

Physicians may contact the Board by writing to the address below or by calling 301-225-5900.

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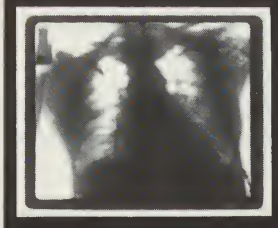



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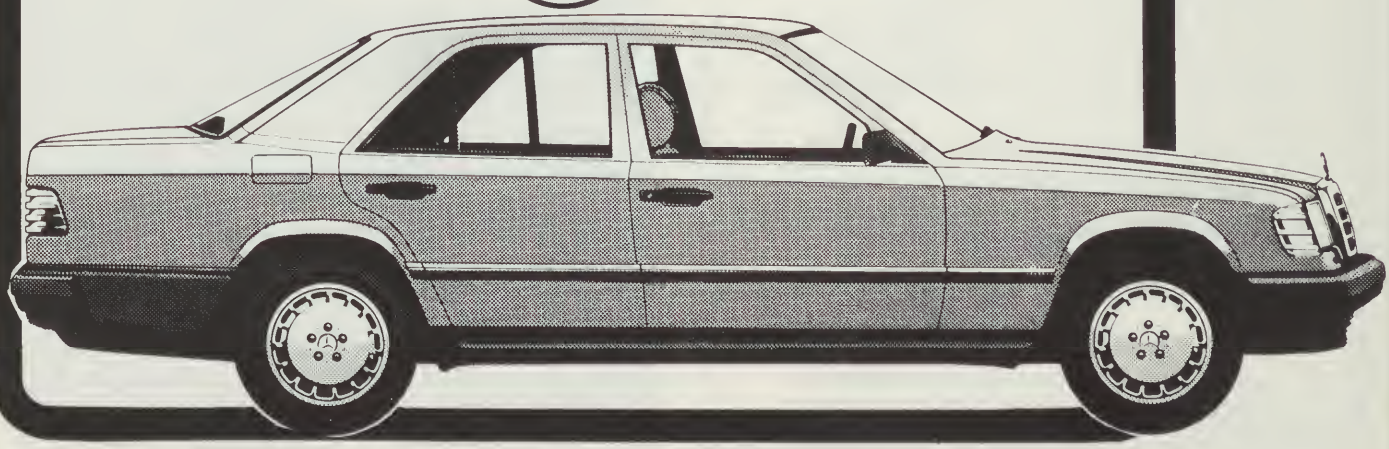
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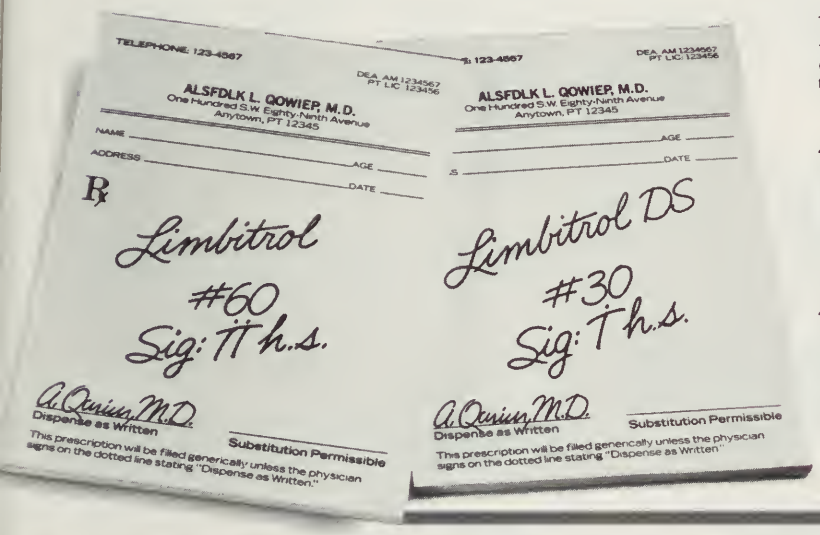
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- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]




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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

# Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

**Limbitrol®Ⓒ IV**
**Tranquilizer—Antidepressant**
**Before prescribing, please consult complete product information, a summary of which follows:**
**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.
**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**
Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).
**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.
**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.
**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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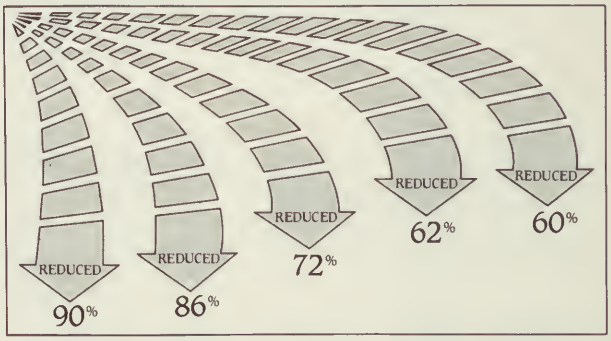
# See Improvement In The First Week...[1]

## And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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**Maryland's Mary Strauss**
**AMA Auxiliary President**
**1988–1989**

# MMJ

**September 1988**

# Maryland Medical Journal

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# THE DOCTOR'S OFFICE

For most of your life, that suite of rooms on Main Street, with the fading prints and the cheerful nurse, was the place you remembered when you thought of the doctor's office. The doctor was a friend and advisor, a respected member of the community, an independent sort. He ran his practice with a mixture of good humor and his best business sense.

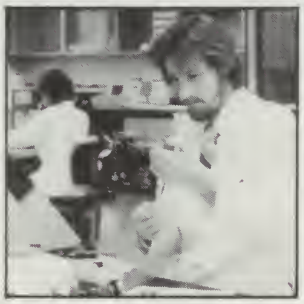
Doctors have had to change their style, and often place, of practice in order to meet the complex, contradictory, and sometimes frustrating demands of the "health care marketplace." Increasingly, doctors, trained to practice medicine and not to compete in the world of business, are finding that individual practice may be impractical. Some are taking salaried positions to stabilize their income and to decrease their individual liability. Some are abandoning areas of practice which place them at risk of litigation or which prove unprofitable in the increasingly competitive market for "health care services."

And while patients are wondering what happened to the "good old doctor," doctors are wondering what happened to the "good old patient." Many patients now seem to be consumers, demanding not only individualized and humane care, but also low cost, convenience, and perfect results. Physicians find themselves caught up in a storm of expectations which they must single-handedly navigate in order to achieve and maintain quality patient

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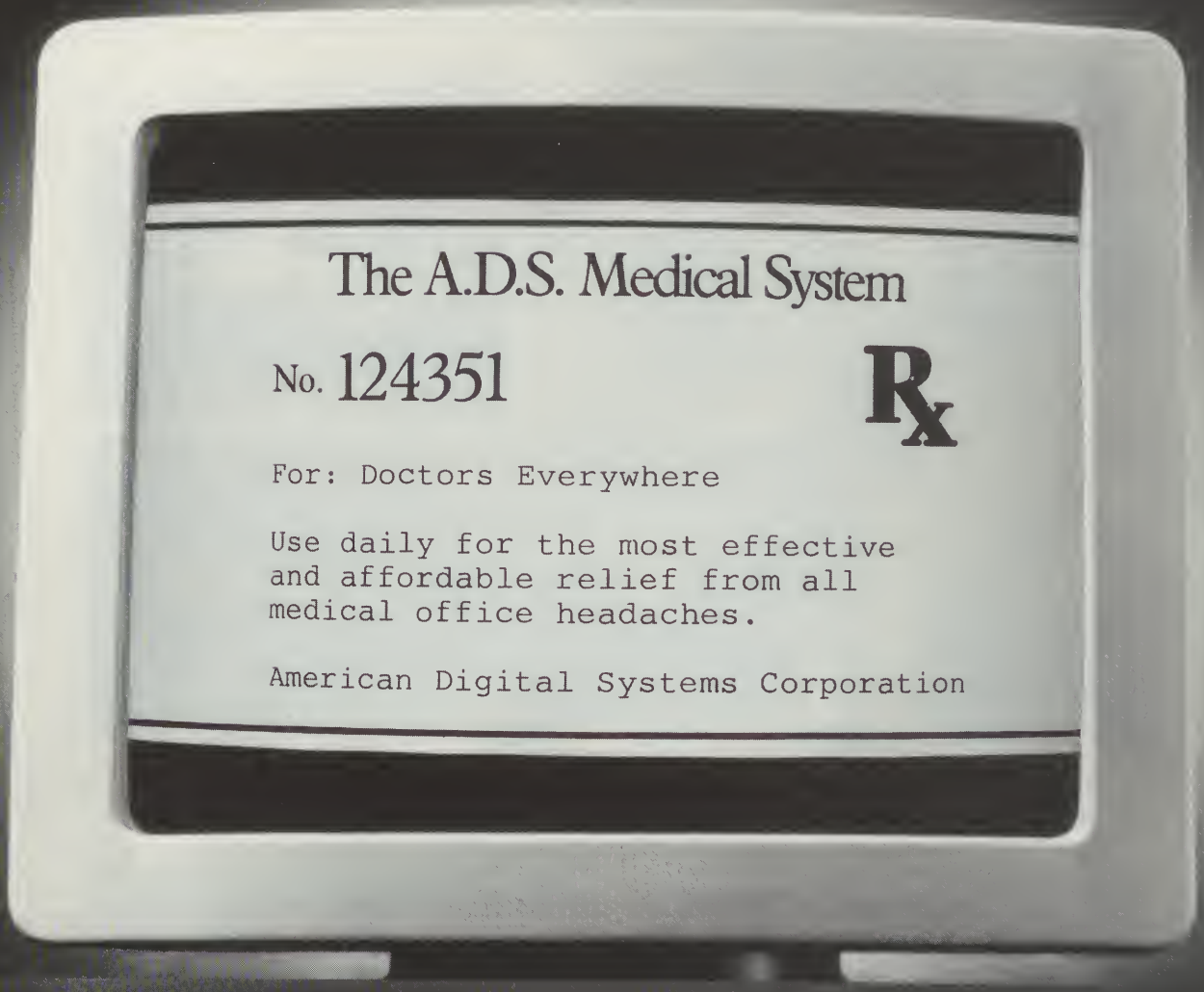
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*Cover: At Maryland's Black-and-Gold Reception honoring Mary Strauss (Mrs. Albert J. Strauss, Jr.) are (from left) Stephanie, Albert III, Mary, Al, and Alexandra.*
*See article beginning on page 682.*

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

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## Fortieth Anniversary: 1949 - 1989

Eva McManus Edmonds is the 1988-1989 President of the Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland and will be the presiding officer at the Auxiliary's Fortieth Anniversary in April 1989. The Faculty adopted a resolution to form a state auxiliary at its Semiannual meeting held in Chestertown in September 1949.

Eva was born and raised in Baltimore. A graduate of the Roland Park Country School, she received her Bachelor of Arts degree in History-Government and a secondary teaching certificate from Beaver College in Glenside, PA in 1970. While attending college, Eva spent a summer political internship in a US Senator's office and a semester of her junior year at the University of London. After a few years of employment, Eva returned to school and received her Master of Science Degree in Education from Johns Hopkins University in 1976. Her area of concentration was reading. Her first position was in an elementary school in Washington County as a Chapter I reading teacher specializing in diagnostic and prescriptive work with the students. She met her future husband, Craig, in 1976 as he "moved west" for employment.

Also a native of Baltimore, Dr. Edmonds is a graduate of the Boys Latin School and Harvard University. He received an MD degree from the College of Physicians and Surgeons of Columbia University in 1968, completed his internship at Kaiser Permanente, San Francisco, and residency in ophthalmology at College of Physicians and Surgeons. He then fulfilled his two- year military service at Ft. Sill, OK. Dr. Edmonds is a board certified ophthalmologist in private practice in Hagerstown.

The Edmonds' have three children: Elizabeth, Timothy, and Katherine. When Eva is not traveling for the Auxiliary, she is driving to piano and ballet lessons or soccer and minor league practices. Eva has served on the school PTA Executive Board and is a cub scout leader for seven boys. She is a Sunday School teacher for second grade and Crusader choir mother for 20 children.

Mrs. Edmonds has been active in the Washington County auxiliary since 1977, serving as president for two terms, 1983 to 1985. She guided the auxiliary in its involvement in Parents Anonymous. The auxiliary was the only volunteer organization asked to help in its formation and assigned weekly auxilians to provide child care that allowed parents to meet to deal with child abuse tendencies. Funds were raised for beginning expenses, and a book on parenting was compiled. Eva solicited articles on child rearing from Hermonine Brewer, an auxilian and instructor of parenting classes, and Albert J. Strauss, Jr., MD, a pediatrician and spouse of an auxilian, AMA Auxiliary's president, Mary M. Strauss.

Eva immediately became involved in the state auxiliary serving for two years as editor of *Hygeia Filiae*. As President-Elect and Membership Chairman, she encouraged her members to "go shopping at the outlets to increase membership." She stressed personal contact for retain- those new members on county boards and projects.

A regional Health Careers Day will be promoted for all county auxiliaries. State auxilians will be encouraged to become more active in the legislative process by communicating with their respective legislators. Above all, the State Auxiliary will be supporting Mary Strauss, Maryland's first American Medical Association Auxiliary President.

## AMA Auxiliary Agenda

Adolescent health and AIDS education were among the concerns that Mary Strauss, of Hagerstown, Md planned to focus on after her installation as president of the American Medical Association Auxiliary on June 29, 1988.

According to Mrs. Strauss, the AMA Auxiliary will continue to work with the American Medical Association (AMA) on its Adolescent Health Initiative, which is a comprehensive plan to reduce the illness and death rates among teens.

"Adolescence can be a very troubled period of life," said Mrs. Strauss, "but the AMA Auxiliary is working hard to help prevent this. Since the AMA's initiative was launched one year ago, local chapters of the AMA



Eva Edmonds, President Med-Chi Auxiliary

Auxiliary to the Medical and Chirurigcal Faculty of the State of Maryland. Mrs. Eva Edmonds President; Mrs. Betty J. Molz Editor.

Auxiliary have implemented over 1,000 projects nationwide, focusing on the prevention of adolescent substance abuse, premature sexuality and pregnancy, suicide, and sexual or physical abuse."

AIDS education will be an important focus of the AMA Auxiliary this year, because this disease is one of the biggest concerns in the country," said Mrs. Strauss. "And as the volunteer arm of the AMA, the Auxiliary has access to the latest information on AIDS, so we have responsibility to help provide the facts to the public."

Through Mrs. Strauss' leadership, AMA Auxiliary members will continue to work actively on other community health concerns, such as a smoke-free society, cholesterol screening, drunk driving prevention, prenatal and postnatal care, seatbelt use, and services for older Americans. According to Mrs. Strauss, in the past year alone, over 5,000 community health service programs were implemented by state and county auxiliaries nationwide.

Locally, she has been active in both the Washington County medical auxiliary and the Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland, serving as president of both organizations. Among her other volunteer and civic activities, Mrs. Strauss has coordinated programs at Western Maryland Hospital and Fharney Keedy Nursing Home, and was a founder and first president of PACE of Washington County, an advocate group for gifted children. Her interests have always focused on health and educational activities.

A graduate of Duke University, Mrs. Strauss received a bachelor's degree in English. She also received a master's degree in education from the University of Virginia.



Mary Strauss, President AMA Auxiliary


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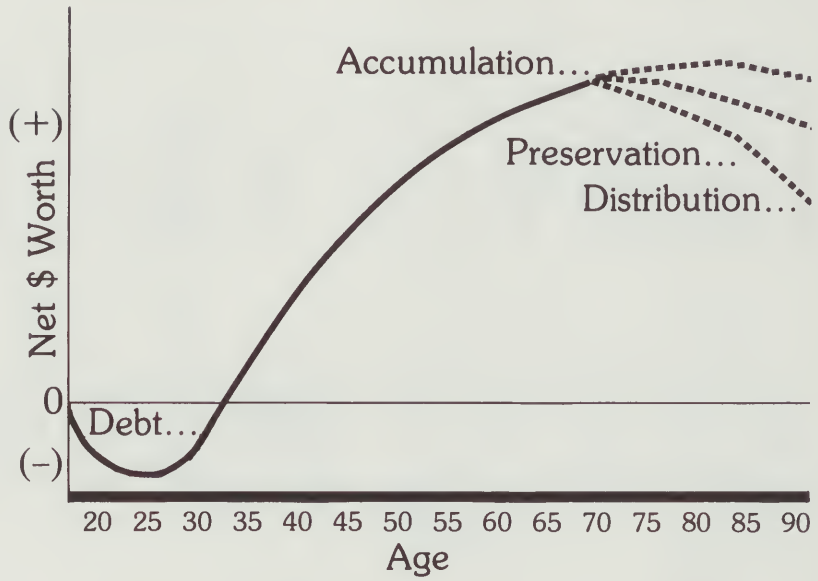


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# EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER

COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

SEPTEMBER 1988

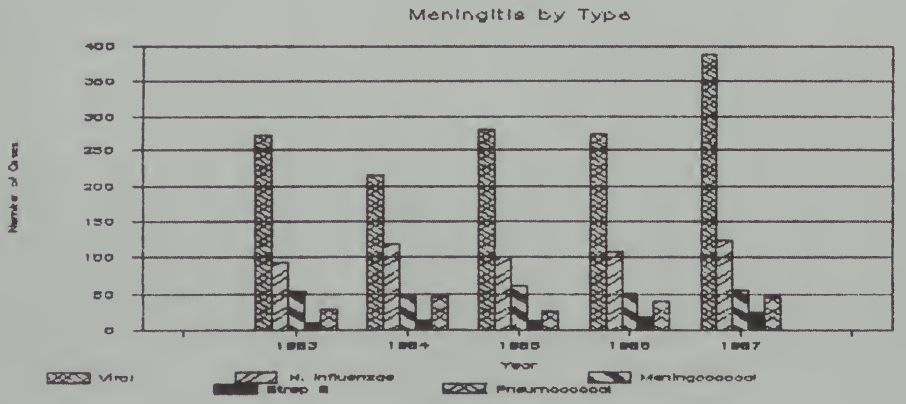
## SELECTED REPORTABLE COMMUNICABLE DISEASES IN MARYLAND IN 1987
## (CONTINUED FROM AUGUST 1988 NEWSLETTER)

**MENINGOCOCCAL INFECTIONS (51) - 1.1/100,000 (USA - 1.2/100,000)**

There was no change in the incidence rate of meningococcal infections from 1986. Almost 40% of all cases were reported from the combined Baltimore City-Baltimore County area. Forty-three percent occurred in January, November and December. The male to female ratio was 1:0.8. Most affected were children one year of age and less (43.1% of the total cases) and individuals 15 to 24 years old (25.5%). While the majority presented with meningitis (32), 13 had meningococcemia, 2 - pneumonia, 2 - otitis media, 1 - arthritis, and 1 - pharyngitis. Eight of the infections were caused by N. meningitidis, serogroup B, 7 by serogroup C, 2 by serotype W135, and the rest (38), were either not tested or unknown. Two patients died - a 35 year old black male with history of drug abuse, and a 20 year old black male with N. meningitidis resistant to ampicillin.

**MENINGITIS, VIRAL (389) - 8.6/100,000 (USA - 4.5/100,000)**

A 41.5% increase from 1986 was noted mainly in Baltimore City and Allegany, Baltimore, Cecil, Harford, and Washington counties. Most affected were individuals 20 to 29 years old (26.2%) and infants 0 to 5 months of age (19.6%), including 24 newborn babies (28 days or less). The majority (65.7%) had onset of illness in July, August, or September. The peak incidence was noted in August with 31.1% of all cases. There were no documented deaths. The most prevalent viral isolate from cerebrospinal fluid and feces in July through October in the State Laboratory was Coxsackie B4, followed by Coxsackie A9, B5 and Echovirus 11 and 14.



**PERTUSSIS (27) - 0.6/100,000 (USA - 1.0/100,000)**

Twenty-seven cases of pertussis in 1987 represent an 83.7% decrease from 1986. Part of this decrease may be explained by the completion of an active surveillance study which enhanced case finding during 1986.

**RABIES, ANIMALS (450)**

Rabies in animals and human exposure to rabid animals will be concerns for Maryland residents and health professionals for the foreseeable future. While the number of reported rabid animal cases in 1987 decreased to 450 (from 683 in 1986 and 760 in 1985), the rabies epizootic in raccoons has continued to spread. Rabid raccoons have been reported in Baltimore City, and in all counties, except on the Eastern Shore (Kent, Queen Anne's, Talbot, Caroline, Somerset, Wicomico, Worcester, and Dorchester counties). Cecil County reported only one rabid animal in 1986 (near the Susquehanna River), but during 1987, 95 cases were reported.

Cyclic patterns are suggested in several counties where peak numbers of rabies cases were reported earlier in the epizootic. Frederick County reported 43 rabid animals in 1987 compared to 18 in 1986. Similarly, Howard had 34 (4 in 1986), Montgomery had 70 (34 in 1986) and Washington had 14 (1 in 1986). Explanations for these cycles at present are based on changes in raccoon populations and density. The initial decimation of the population by rabies is followed by a rebound in the number of susceptible animals as the area is repopulated.

Raccoons are the primary species involved in rabies in Maryland and accounted for 85% (384/450) of the cases reported in 1987. Spillover into other wild animal species resulted in rabies in 20 skunks, 18 foxes, and 2 ground hogs. Domestic animals continue to account for most of the post-exposure rabies prophylaxis given to people in the United States. The rabies cases reported in 1987 included 4 dogs, 2 cats, and 2 cows. Eighteen rabid bats were reported. Differences in the virus strains found in bats using monoclonal antibodies confirms epidemiological evidence that the bat rabies cycle is distinct from the rabies epizootic which affects terrestrial animals in Maryland. There have been no human cases of rabies reported in Maryland since 1976 when a woman died following a bite by a rabid bat.

**ROCKY MOUNTAIN SPOTTED FEVER (43) - 1.0/100,000 (USA 0.2/100,000)**

A 48% increase from 1986 was observed. The first three patients became ill in April, most other cases occurred in May (15) and June (13), and the last one in September. Most affected were Anne Arundel and Talbot Counties, each with six cases, followed by Harford (4), Dorchester (3), Frederick (3), and Montgomery (3). The following counties had none: Garrett, Howard, Kent, Somerset, and Wicomico. Two cases belonged to the same family. The youngest patient was 17 months old, and the oldest was 80 years of age, but 40% were 14 years or less and almost 80% were younger than 36. The male to female ratio was 1.5 to 1 and 88% were white. Seventy-nine percent of the reported

cases required hospitalization; admission occurred on average on the 4th day after the onset of symptoms, with treatment starting at the same time. Most physicians treated their patients with chloramphenicol (18), followed by tetracycline (13) or both (5). There were no fatalities and all patients recovered fully. Twenty-seven (63 percent) of the cases were confirmed by IFA, CF, latex agglutination, or FA of skin obtained through biopsy. Two cases were categorized as probable; and the rest were not confirmed, mainly because the patients or their parents (in the case of minors) refused further testing. Sixty-seven percent of the patients had a tick bite or attachment within fourteen days of onset, 21 percent had visited a known tick infested area; the rest had no available history of exposure.

**RUBELLA (4) - 0.09/100,000 (USA - 0.1/100,000)**

Three of the reported cases were imported from Japan, England or Taiwan; the fourth had been exposed to the case reported from England. The age of the patients ranged from 12 to 33 years.

**SALMONELLOSIS (1810) - 40.2/100,000 (USA - NA)**

In 1987, a 10.2% increase was observed from the previous year and an almost 150% increase from 1975. More than half (51.2%) of all cases occurred in June through September. During the year, there were 17 outbreaks of salmonellosis reported. Baltimore City had the highest incidence rate (67.7 per 100,000) and 28.2% of all cases. One-third of all patients were 4 years of age or younger, including 17.7% under 1 year of age. An additional 23.9% were 20 to 39 years old. Serotype was reported for 1,241 cases (68.6%); the 5 most prevalent were S. enteritidis - 289 (23.3%), S. typhimurium - 287 (23.1%), S. heidelberg - 182 (14.7%), S. infantis - 80 (6.4%) and S. newport - 75 (6.0%). An almost fourfold increase of S. enteritidis isolates has been noted since 1978.

**SHIGELLOSIS (632) - 14.0/100,000 (USA - NA)**

Shigellosis has been steadily rising since 1985 when the incidence rate was 4.4/100,000. A significant increase was noted in the second half of 1987, when 79.3% of all cases occurred (3.8 times more than in January through June) and 6 outbreaks (4 in day care centers) were reported and investigated. Another outbreak, involving 73 cases (students in private Jewish schools and their families in the Baltimore Metropolitan area) in April through July, appeared to be linked to outbreaks in New York. Shigellosis was most prevalent in children less than 5 years of age (31.0% of all cases) with a peak among 3 to 4 year olds. Almost half (46.8%) of all affected were residents of Baltimore City with an incidence rate of 39.3/100,000 - 2.8 times higher than that in the State, and the rate among blacks was 2.5 times than in whites. The peak incidence was among 2 year old black children. Twenty of the 22 cases in newborns (28 days old or younger) were from Baltimore City. Overall, the male to female ratio was 1:1.2, but in newborns it was 1:3. Serotypes were available for 566 (90.0%) of the 632 isolates. S. sonnei was the most prevalent (91.7%), followed by S. flexneri (7.4%), S. boydii (0.5%) and S. dysenteriae (0.4%).

## SYPHILIS (597) - 13.3/100,000 (USA - 14.6/100,000)

An overall increase of 32.4% in primary and secondary (P&S) syphilis was noted. The greatest rise occurred in Baltimore City and in Prince George's County. These areas have a young urban population in which syphilis rates have shown the most growth. Increases in syphilis among women of childbearing age are accompanied by increased reports of congenital syphilis, and there were two cases of congenital syphilis reported in 1987. In addition, lesion diseases, such as syphilis, have been implicated as facilitating transmission of human immunodeficiency virus (HIV) infection. The population experiencing the largest growth in reported P&S syphilis (young heterosexual men and women living in urban areas) is therefore at greater risk for infection with HIV.

P&S syphilis should always be part of the differential diagnosis when a young, sexually active person presents with an ulcerative lesion at a site of potential sexual exposure or with an unusual rash. Local health departments can be contacted for information regarding the management, treatment and follow-up of patients with a diagnosis of syphilis.

## TUBERCULOSIS (429) - 9.5/100,000 (USA - 8.9/100,000)

After years of significant decline in TB morbidity, Maryland experienced a 16% increase in reported cases. Although the number of cases actually declined in Baltimore City, the counties offset that decline with an increase of 28% Groups at especially high risk of tuberculosis included racial and ethnic minorities (case rates among non-whites have consistently been 4-5 times greater than case rates among the white population). The foreign-born accounted for nearly 30% of cases (82 cases) outside of Baltimore City. Baltimore, Montgomery, Prince George's, and Wicomico counties, accounted for 73% of the TB cases outside of Baltimore City.

Although few cases of TB and AIDS have been verified in Maryland to date, increases in the number of persons with HIV infection portend a significant future increase.

## TYPHOID FEVER (8) - 0.2/100,000 (USA - 0.1/100,000)

All 8 cases were confirmed by blood culture positive for S. typhi. No fatalities were noted. Three patients were members of the same family with onset of illness at the same time; all three had exposure in Nigeria. The rest of the cases were from or had visited India (3), Bangladesh (1), and Taiwan (1).

**ACKNOWLEDGEMENTS:**

For many diseases and conditions, additional information was obtained from active surveillance systems maintained by public health nurses in local health departments and infection control practitioners in hospitals. We appreciate their efforts and the efforts of physicians and laboratories throughout Maryland who reported to us during 1987.

# Psychotherapy: How Scientific and Effective Is It?

*JACOB H. CONN, MD**

Psychotherapy has been described as being a healing art, a type of education, a kind of persuasive rhetoric, a philosophy of life, and a form of scientific investigation.[1] There are more than 250 kinds of psychotherapy, and each innovator maintains that his/her type of psychotherapy is superior in some way.[2] In the therapeutic race, every approach claims to have won the prize.

All methods share certain common features. Frank [1] lists four universal components:

> 1. an emotionally charged confiding relationship with a helping person;
> 2. a setting which is identified by the patient as being a place of healing;
> 3. a therapeutic rationale that explains the patient's symptoms;
> 4. a procedure for relieving the symptoms that requires active participation by both the patient and the therapist.

The scientific pretenses of psychoanalysis have been challenged and found to be seriously flawed.[3] Each school of psychotherapy presents a different kind of clinical data. Freudians elicit material about the oedipus complex and castration anxiety, Adlerians about masculine strivings and the inferiority complex, Horneyans about idealized images, Sullivanians about distorted interpersonal relations, and so on.[4] Only Jungians elicit data about primordial archetypes (the anima, animus, and the shadow).

The sectarian character of psychotherapeutic practice includes a diversity of approaches, each with its own theoretical set of explanations; all tend to be self-serving and self-validating. Common to all schools is the impact of the patient and the therapist on each other. Marmor[4] has demonstrated

> what the therapist shows interest in, the kinds of questions that he asks, the kinds of data that he chooses to react to or ignore, and the interpretations that he makes exert a subtle, but significant, suggestive impact upon the patient to bring forth certain kinds of data in preference to others.

It follows from these observations that the patient's responses and "free" associations are strongly influenced by the beliefs, expectations, values, verbal comments, and the nonverbal behavior of the therapist. There are also the urgent needs of the patient to be accepted and to idealize the therapist (transference feelings), which play a dominant role.

All schools of psychotherapy are successful to some degree, but these successes do not imply the scientific truth of their underlying theories. Each school provides a plausable explanation of the patient's symptoms, but as Jaspers has asserted, these formulations are interpretations and inconclusive hypotheses that need to be tested. Indeed, it is in the very nature of meaningfulness that unlimited viewpoints can be brought forward to account for the elements in the life story.[5]

Nevertheless, most investigators would agree that psychotherapy is more effective than a placebo. What components contribute to its efficacy?

The FAITH CURES may be used as mnemonic devices to recall the attitudes and aptitudes essential to all psychotherapeutic procedures. The first term, FAITH, includes: F for the Freedom from judgmental attitudes; A for the therapeutic alliance between two or more committee individuals working toward a common goal; I is the Idealization of and the identification with the therapist; T refers to the patient's Transference and trust in the integrity and competence of the therapist; H represents Hope and the Help-seeking subservience of a patient in distress.

The second term, CURES, contains: C for the Charisma and Credibility of the therapist; U for his/her Understanding and Uncritical acceptance of the patient; R represents Reinforcement as well as the patient's Responsibility for what he, himself, has contributed to his conflictual behavior; E refers to the therapists' Empathy and the Enthusiasm for his/her own belief system; S is the ubiquitous component of Suggestibility or the patient's ability to become a credulous disciple of the therapist's mode of healing and values.

All these components, and many others, play significant roles in every type of psychotherapy. Thus the basic need of every patient for approval and affection, as well as for mastery and control, must be provided.

When these human needs are gratified to some degree, we have attained a partial understanding of the effectiveness of every type of psychotherapy.

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*Assistant Professor of Psychiatry (Emeritus), Johns Hopkins University Schools of Medicine.

Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor

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# Executive Director's Newsletter

September 1988

**PHYSICIAN QUALITY ASSURANCE BOARD APPOINTEES**

The new members of the Physicians Quality Assurance Board have been named by Governor Schaefer. Of the twelve physicians placed on the Board, ten were chosen from a list of eighteen physicians submitted by Med Chi. The new physician members are:

Rose M. Bonsack, M.D. - General Practice
Peter E. Dans, M.D. - Infectious Disease
Claude D. Hill, M.D. - Obstetrics/Gynecology
Lawrence A. Jones, M.D. - Urology
David P. Largey, M.D. - General Surgery
Renaldo Lee-Llacer, M.D. - General Surgery/Thoracic Surgery
John T. Lynn, M.D. - Orthopedic Surgery
John F. Strahan, M.D. - Dermatology
J. Andrew Sumner, M.D. - Emergency Medicine
Israel H. Weiner, M.D. - Neurological Surgery
Bernard S. Kleinman. M.D. - Otolaryngology
Mack Bonner, M.D. - Internal Medicine

**RELEASE OF HCFA MEDICAL REVIEW POLICIES**

In response to lobbying efforts on the part of the AMA and state medical associations, HCFA has issued new instructions to Medicare carriers regarding the release of written medical review policies. As of June 1, 1988, carriers were required to disclose upon request "written policy to evaluate and make payment decisions" under Medicare. Up until now, the release of local carrier policies has been at the discretion of individual carriers. Med Chi has written to Maryland Blue Cross and Blue Shield and Pennsylvania Blue Cross requesting copies of all such written policies and, after it has been received and analyzed, Med Chi will disseminate this information to its members. Use of this information should reduce the number of "medically unnecessary" notices among physicians state-wide.

**MED CHI INTERSPECIALTY COMMITTEE**

Med Chi has recently established an Interspecialty Society Committee, composed of representatives from among specialty societies in Maryland. A major impetus for creating this committee is the impending analysis of the Resource Based Relative Value Scale (RBRVS), a physician payment plan currently in the final stages of development at Harvard University. In order to fairly assess the RBRVS, representation and input from every specialty will be crucial. Updates on the RBRVS and the activities of the new committee will be disseminated after the study has been published.

PRECARE REFERRAL NETWORK

The Senior Citizen referral network being developed at Med Chi, "PRECARE" (Physician Referral for Elder Care), is close to becoming fully operational. With cooperation and involvement of county medical societies, local hospitals and the Maryland Department on Aging's Gateway offices, Med Chi looks forward to introducing PRECARE to seniors sometime this Fall. Some seniors have argued that they want or need to receive health care on an assigned basis. The PRECARE telephone referral network is being developed in response to that need, in order that physicians can provide every senior, regardless of income, assets, or medical condition, with appropriate care.

WE NEED YOUR HELP- MEDICAL ASSISTANCE: DIVERSION OF SERVICES AND SURVEY

We need your help in order to determine your opinions concerning the state Medicaid program in general, and particularly in light of a proposed major change in program management which Med Chi has forwarded to the Presidents of each Component Medical Society and to each member of Council. Highlights of the proposed program changes appear below but as of this writing have been neither finalized or approved.

The Medical Assistance "Diversion of Services" program, slated to go into effect on October 1st, is an attempt to control the increasing costs of Medicaid services. The program's aim is to divert Medicaid beneficiaries from emergency rooms and hospital outpatient departments into private practice settings. However, since the program leaves many questions unanswered, Med Chi has declined to support the program as initially presented and has strongly suggested further study before its implementation. Additional study should cover issues such as:

* Phasing-in of the concept gradually instead of by October 1st to allow for greater compliance and understanding of the program goals by Medicaid recipients and physicians alike.
* Allowing for education of physicians who will be affected by the program.
* Determining the degree of impact the program may have on Maryland's teaching hospitals.

In order to accurately respond to these and other proposed changes by DHMH, Med Chi is seeking your input on the Medical Assistance program. Please take a minute to let us know what changes you feel should be made to the Medicaid program in Maryland by filling out the attached survey.

**Angelo J. Troisi, FACHE**
**Executive Director**

# Medicaid Survey

**Did you know that...**

*... you may participate in Medicaid on a case-by-case basis (similar to Medicare) and that you do not need to accept Medicaid assignment 100% of the time?*

*...the reimbursement for Medical Assistance patients will be increased by 10%, effective in January of 1989?*

*...in Maryland, the Medical Assistance program paid about 70 million dollars for 505,908 total visits in hospital emergency rooms and outpatient departments 1987?*

Please circle appropriate answer.

1. Do you currently participate in the Medical Assistance program?
   a. Not at all
   b. 100% of the time
   c. On a case-by-case basis
   d. Other (explain)

2. If you answered "not at all" to question #1, what changes or incentives would you like to make in the program that would convince you to participate? Please list: (Additional space is has been provided on back.)

3. Some physicians have indicated to us that they treat Medicaid patients without charging them. Do you see Medicaid patients and not charge them?
   a. yes (if "yes", why?)

   b. no

4. As a Medicaid participant, approximately what percentage of your patient workload is derived from Medical Assistance?
   a. _____%
   b. N/A

5. Of your peer physicians, why have some chosen to participate in the Medicaid program while others have not?

6. What is the most significant aspect of the Medical Assistance program that you would like to see changed?
   a. Amount of reimbursement
   b. Billing practices
   c. Medicaid patient eligibility
   d. Other (explain)

7. What would you like to see changed in order to make the Medical Assistance billing process easier?
   a. Inclusion of MPS (AMA Medical Payment System)
   b. Other (explain)

Please use this space to write down any other concerns or suggestions regarding the Medicaid program - we want to know what you think.

What is your specialty?

Please remove page, fold, staple and return to:

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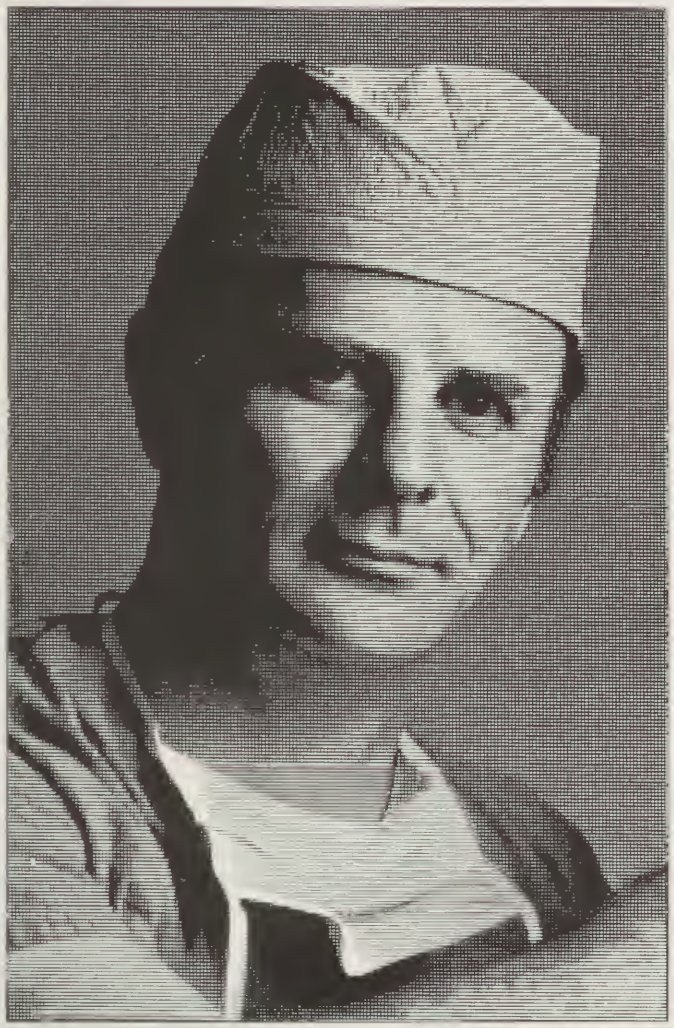
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# Revision of Guidelines for High Blood Pressure Management: JNC IV

*MARTHA N. HILL RN, PhD and R. PATTERSON RUSSELL MD*

**Since publication of the first report of the Joint National Committee (JNC) on Detection, Evaluation and Treatment of High Blood Pressure in 1977 remarkable changes have occurred in the control of hypertension. The 1988 Report (JNC IV) has been recently released. This report is intended as a guide for practicing physicians and other health professionals in their care of hypertensive patients and as a reference for those participating in the many community HBP control programs throughout the country. HBP Commentary provides an overview and focuses on the major changes from the 1984 JNC III Report.**

The National High Blood Pressure Education Program has released three Joint National Committee reports and a task force report on the detection, evaluation, and treatment of high blood pressure. Like its predecessors, the 1988 Joint National Committee Report, published in its entirety in the May issue of *Archives of Internal Medicine*, was developed using the consensus process.[1] It is based on the latest scientific research, reflects the state of the art regarding hypertension management, and updates findings of previous reports in several respects:

- broadening the step-care approach to provide more flexibility for clinicians
- encouraging greater patient involvement in the treatment program
- emphasizing a consideration of the quality of life in the management of patients
- addressing the cost of care

The Report updates previous drug tables by including new drugs, revised recommended doses of some drugs, and a list of drug interactions. Consideration of step-down therapy after blood pressure has been controlled for some time is suggested.

The Report also provides emphasis on control of other risk factors for cardiovascular disease, includes a discussion of the new cholesterol guidelines, recommends a reduction in alcohol consumption, and comments on the use of calcium and fish oil supplementation. It expands the discussion in earlier reports on treatment of special populations.

*Definition* (140/90 mmHg) and *prevalence* of HBP, *classification* of BP in adults, and *follow-up criteria* for initial BP measurement remain unchanged from the JNC III Report.[2,3] There is a somewhat expanded section on correct *measurement techniques*. While *ambulatory monitoring* is briefly discussed, it is considered not usually cost effective.

Dr. Hill, Assistant Professor at the Johns Hopkins School of Nursing, served on the Joint National Committees for Reports III and IV. Dr. Russell is Associate Professor, Johns Hopkins School of Medicine, and past Chairman of the Commission.

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

## Treatment

The introduction to the Treatment section of the Report states:

> the decision to initiate treatment in individual patients requires physicians to consider at least two factors: the severity of blood pressure elevation and the presence of other complications. The effectiveness of antihypertensive drugs in reducing elevated arterial pressure is well established. In this regard, recent evidence suggests that nonpharmacologic approaches, particularly weight reduction, salt restriction, and moderation of alcohol consumption, may lower elevated pressure and improve the efficacy of pharmacologic events. Therefore, nonpharmacologic approaches are used both as definitive intervention and as a adjunct to pharmacologic therapy and should be considered for all antihypertensive therapy. Clinicians may wish to refer to other health providers for specific counseling related to life-style changes.

An expanded section on *nonpharmacologic therapy* follows and includes mention of exercise and modification of dietary fat, the latter to reduce risk of coronary artery disease. Discussion of current public attention to the value of fish and fish oils concludes, "while fish consumption is recommended, the health benefits of fish oil capsules have not been proven."

A major focus of nonpharmacologic therapy continues to be weight reduction with goal body weight being within 15 percent of desirable weight. A more conservative limit on alcohol consumption is now advised, with a daily limit of 1 oz of pure ethanol (2 oz whiskey, 8 oz wine, 24 oz beer).

## Pharmacologic Therapy

Recommendations for pharmacologic therapy have been modified on the bases of recent clinical trial data and availability of newer antihypertensive drugs. The Report states, "the benefits of drug therapy appear to outweigh any known risks to individuals with a persistently elevated DBP greater than 94 mmHg and to those with lesser elevations who are otherwise at high risk (men, smokers, or patients with target organ damage, diabetes mellitus, hyperlipidemia, or other major risk factors for cardiovascular disease). Patients whose DBPs fall between 90 and 94 mmHg and who are otherwise at relatively low risk of developing cardiovascular disease should be treated (first) with nonpharmacologic approaches."

## Table. Antihypertensive Drugs

| Type of Drug | Dosage Range, mg/d* Usual Minimum | Usual Maximum |
|---|---|---|
| Clonidine TTS (Patch)‖ | 0.1 | 0.3 |
| Guanabenz‡ | 4 | 64 |
| Guanfacine hydrochloride | 1 | 3 |
| Methyldopa‡ | 250 | 2000 |
| Peripheral-acting adrenergic antagonists | | |
| Guanadrel sulfate‡ | 10 | 100 |
| Guanethidine monosulfate | 10 | 150 |
| Rauwolfia alkaloids | | |
| Rauwolfia (whole root) | 50 | 100 |
| Reserpine | 0.1 | 0.25 |
| $\alpha_1$-Adrenergic blockers | | |
| Prazosin hydrochloride‡ | 1-2 | 20 |
| Terazosin hydrochloride | 1-2 | 20 |
| Combined α-β-adrenergic blocker: labetalol‡ | 200 | 1800 |
| Vasodilators | | |
| Hydralazine‡ | 50 | 300 |
| Minoxidil‡ | 2.5 | 80 |
| Angiotensin-converting enzyme inhibitors | | |
| Captopril‡ | 25-50 | 300 |
| Enalapril maleate | 2.5-5 | 40 |
| Lisinopril | 5 | 40 |
| Calcium antagonists | | |
| Diltiazem hydrochloride¶ | 60 | 360 |
| Nifedipine¶ | 30 | 180 |
| Nitrendipine | 5 | 40 |
| Verapamil¶ | 120 | 480 |
| Verapamil SR (long-acting) | 120 | 480 |
| Diuretics | | |
| Thiazides and related sulfonamide diuretics | | |
| Bendroflumethiazide | 2.5 | 5 |
| Benzthiazide | 12.5-25 | 50 |
| Chlorothiazide | 125-250 | 500 |
| Chlorthalidone | 12.5-25 | 50 |
| Cyclothiazide | 1 | 2 |
| Hydrochlorothiazide | 12.5-25 | 50 |
| Hydroflumethiazide | 12.5-25 | 50 |
| Indapamide | 2.5 | 5 |
| Methyclothiazide | 2.5 | 5 |
| Metolazone | 1.25 | 10 |
| Polythiazide | 2 | 4 |
| Quinethazone | 25 | 100 |
| Trichlormethiazide | 1-2 | 4 |
| Loop diuretics† | | |
| Bumetanide‡ | 0.5 | 5 |
| Ethacrynic acid‡ | 25 | 100 |
| Furosemide‡ | 20-40 | 320 |
| Potassium-sparing agents | | |
| Amiloride | 5 | 10 |
| Spironolactone | 25 | 100 |
| Triamterene | 50 | 150 |
| Adrenergic inhibitors | | |
| β-Adrenergic blockers§ | | |
| Acebutolol | 200 | 1200 |
| Atenolol | 25 | 150 |
| Metoprolol | 50 | 200 |
| Nadolol | 40 | 320 |
| Penbutolol sulfate | 20 | 80 |
| Pindolol‡ | 10 | 60 |
| Propranolol hydrochloride‡ | 40 | 320 |
| Propranolol, long-acting | 60 | 320 |
| Timolol‡ | 20 | 80 |
| Centrally acting α-blockers | | |
| Clonidine‡ | 0.1 | 1.2 |

*The dosage range may differ slightly from the recommended dosage in the *Physicians' Desk Reference* or package insert.

†Larger doses of loop diuretics may be required in patients with renal failure.

‡This drug is usually given in divided doses twice daily.

§Atenolol, metoprolol, and acebutolol are cardioselective; pindolol and acebutolol have partial agonist activity.

‖This drug is administered as a skin patch once weekly.

¶This drug is usually given in divided doses three or four times daily.

### Selection of Drug Treatment for Uncomplicated Hypertension

**Initial Therapy** The Table lists several classes of currently available drugs that have demonstrated antihypertensive efficacy. The large numbers of these drugs provide many excellent therapeutic options for lowering blood pressure effectively and minimizing side effects; individual patients may respond better to one class of drug than to another. While the 1984 JNC Report recommended that either thiazide-type diuretics or β-blockers be used as initial therapy (unless contraindications exist), clinical experience obtained since then indicates that ACE inhibitors and calcium antagonists are also useful drugs for this purpose. In about half of the patient group with mild hypertension, a moderate dose of any one of these several drugs will achieve a DBP reduction of 10 mmHg or more or lower the DBP to the desired goal (< 90 mmHg). The Figure illustrates a scheme for individualized stepped care therapy. (Some drugs, such as the direct-acting vasodilators (for example, hydralazine and minoxidil) are not well suited for initial monotherapy since they often induce reflexed sympathetic stimulation and fluid retention.)

**Subsequent Therapy** If, after a one-to three-month interval, the response to the initial choice of therapy is inadequate but adherence to therapy is adequate, and the patient is not experiencing significant side effects, three options for subsequent therapy should be considered: increasing the dose of the first drug if it is below the recommended maximum; adding an agent from another class; or discontinuing the initial choice and substituting a drug from anther class. Before proceeding to each successive treatment step, physicians should address possible reasons for lack of responsiveness.

Combining antihypertensive drugs having different modes of action, using the step-care approach, often will allow small doses of drugs to be used to achieve control, thereby minimizing the potential for dose-dependent side effects. If a diuretic is not chosen as a first drug, it often will be required as the second one since fluid retention (pseudo-tolerance) may be responsible in part for the suboptimal response to nondiuretic agents and since the addition of a diuretic will usually enhance the effects of other drugs. When additional drugs are added and the combination succeeds, a later attempt should be made to reduce the dose and, if possible, to eliminate the initial drugs.

After blood pressure is reduced to goal level and maintenance doses of antihypertensive drugs are stabilized, substituting comparable combination tablets may simplify patients' regimens, reduce medication costs, and promote adherence to a comprehensive treatment program.

### Step-Down Therapy and Drug Withdrawal

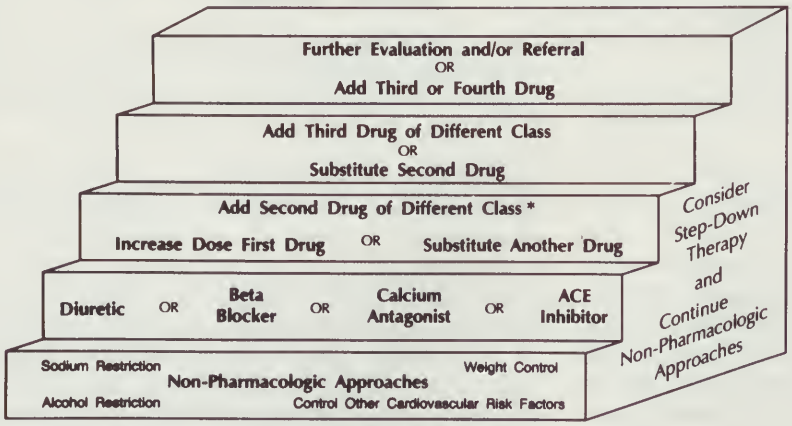
Step-down therapy is an important concept in the 1988 Report. For patients with mild hypertension who have satisfactorily controlled their blood pressure through treatment for at least one year, antihypertensive drugs may be reduced in a stepwise fashion. Reduction may be particularly effective in patients who are also following nonpharmacologic therapeutic recommendations. Since the goal of therapy is to control blood pressure with the fewest drugs, at their lowest dose, sound patient management should include attempts to decrease the dosage of number of antihypertensive drugs while maintaining and reinforcing nonpharmacologic modalities. Regular follow-up must be maintained because blood pressure may rise again to hypertensive levels, even after remaining at controlled levels for a long period.

### Other Issues

Other sections of the Report deal with special considerations in choice of drugs, isolated systolic hypertension, moderate and severe hypertension, treatment of refractory hypertension, and hypertensive emergencies and urgencies. A section on long-term maintenance of therapy guides the physician in terms of monitoring, communication with the patient, and enhancing adherence to therapy.

JNC IV recognizes that drug treatment may effect *quality of life:*

> Although treatment of hypertension is a medical necessity, the impact of antihypertensive therapy on quality of life is a legitimate concern. Patients treated with various drugs sometimes experience subtle changes in emotional status, behavior, and both physical and cognitive function.
>
> Although some antihypertensive agents produce undesirable side effects more often than do other drugs, practitioners must address the impact of treatment on the quality of life for each patient.
>
> There is also a new recognition of the *cost of care:* For some patients, lifelong antihypertensive care produces a burdensome financial obligation. Health care providers should be aware of the total cost of care to hypertensive patients (including indirect costs such as time lost from work and transportation costs) and




Individualized step-care therapy for hypertension. For some patients, nonpharmacologic therapy should be tried first. If blood pressure goal is not achieved, add pharmacologic therapy. Other patients may require pharmacologic therapy initially. In these instances, nonpharmacologic therapy may be helpful adjunct. ACE indicates angiotensin-converting enzyme; asterisk, drugs such as diuretics, β-blockers, calcium antagonists, ACE inhibitors, α-blockers, centrally acting $\alpha_2$-agonists, rauwolfia serpentina, and vasodilators.

should try to minimize these expenses. Determinants of cost include the initial work-up, follow-up visits, and drugs. The realistic assessment of the economic impact of each drug involves consideration of intrinsic cost, burden of side effects, and additional laboratory tests required for monitoring. Cost may reduce overall benefit of treatment by reducing adherence.

Information on treatment of *special populations* is expanded considerably from the 1984 Report, and includes treatment issues specific to blacks and other racial and ethnic minority groups; young and elderly patients; pregnant patients; surgical candidates; and hypertensive patients with cerebrovascular disease, coronary artery disease, left ventricular hypertrophy, congestive heart failure, peripheral vascular disease, renal disease, chronic obstructive pulmonary disease or bronchial asthma, gout, diabetes mellitus, and hyperlipidemia.

The complete 1988 Report appeared in the May 1988 issue of *Archives of Internal Medicine*. Physicians also may call the Commission to request a copy.

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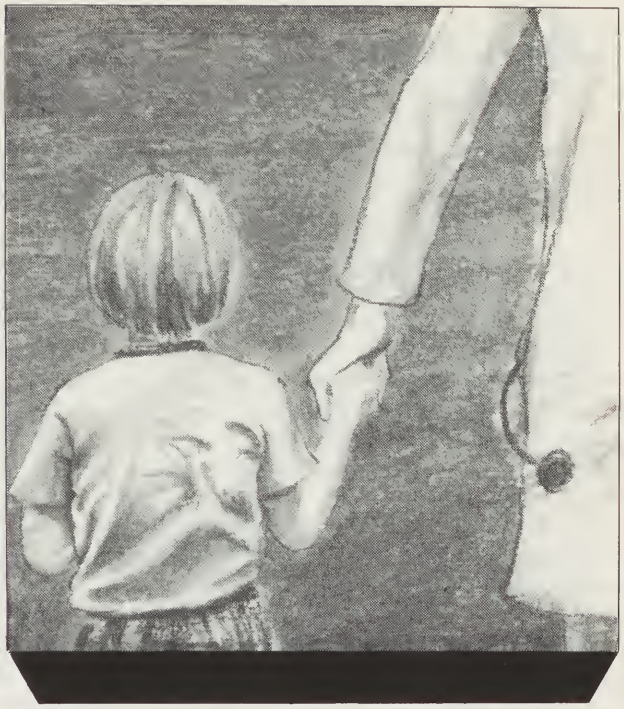

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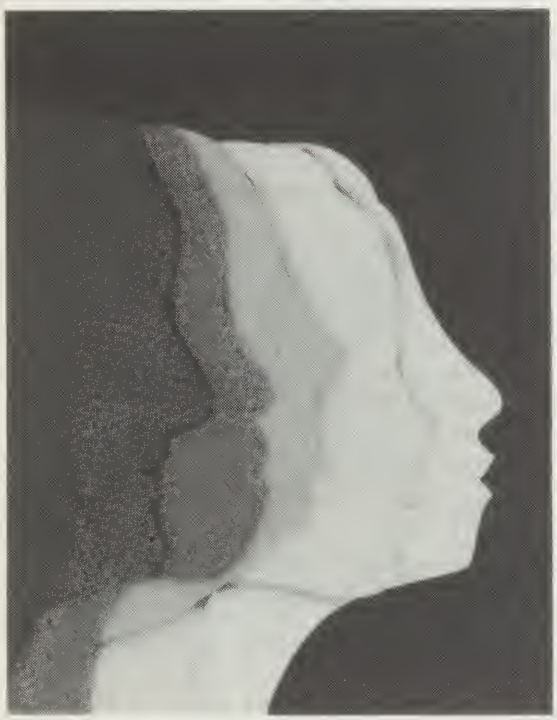




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# Rare Tumors of the Pancreas

### Cystadenoma and Cystadenocarcinoma

These two tumors, benign and malignant, may comprise 4 to 10 percent of all pancreatic cysts, with tendency to occur more often in women than in men, usually between ages 45 and 60. Patients frequently present with epigastric fullness and/or pain in the upper part of the abdomen, without history of abdominal trauma or excessive consumption of alcohol. The duration of symptoms can range from two months to two years, with an average duration of 18 months. These tumors may grow very slowly and never have clinical presentation, to be discovered at autopsy. On the other hand, those which present clinically may be associated with other conditions such as diabetes mellitus, abnormal thyroid function tests, polycystic disease of the liver and kidneys, or biliary disease. Roentgenologically, there are no classical diagnostic findings for these tumors. Calcification may be seen in the wall of the cyst in about 10 percent of the patients. Almost two thirds of these tumors are located in the body and tail and one third in the head of the pancreas. Cystadenomas can reach large size and be misdiagnosed as pseudocysts and are anastomosed to the stomach or to the bowel. The surgeon should suspect cystadenoma if there is no previous history of pancreatitis, alcoholism, or abdominal trauma.

Cystadenocarcinomas are usually papillary type, and on opening the cyst, multiple papillomata can be seen in the cavity. Biopsy of the papillae or the internal surface of the cyst and frozen section can differentiate cystadenoma and cystadenocarcinoma from pseudocyst of the pancreas. These tumors are characterized by local expansion and invasion without metastases. Therefore, every effort should be made for complete surgical extirpation of these tumors. Fortunately, these tumors do not often arise in the head of the pancreas, and therefore they are usually treated by distal pancreatectomy.

### Benign Tumors

The head of the pancreas, as well as the body and tail, can be sites of a variety of benign tumors. Despite their benign nature, pancreatic resection must be carried out. This may include distal pancreatectomy for tumors that involve the body and tail, and a Whipple procedure for those involving the head of the pancreas.

### Endocrine Tumors of the Pancreas

These are also known as "pancreatic islet cell tumors," as all of them originate from the islet cells of the pancreas. While 15 percent of the patients may have no symptoms as they have no recognizable hormonal secretions from these tumors, the majority secrete different peptides. Some of these tumors may be located outside the pancreas in the stomach, duodenum, and small intestine. Furthermore, patients with any of these tumors are liable to have multiple syndromes as these tumors may secrete different peptides, or the patient may have more than one tumor. These tumors can be in the form of benign adenomas, multiple adenomas with hyperplasia, or malignant tumors. All of the malignant tumors tend to metastasize to the regional lymph nodes then to the liver. Once the patient presents with symptoms, and the physician suspects one of these tumors, blood level determination of the peptide is pathognomonic. The availability of radioimmunoassays has been of great help in making the diagnosis.

**Insulinoma** is a Beta cell tumor that can be located at any part of the pancreas. Ninety-five percent of these tumors are benign. They present with hypoglycemia with a fasting blood sugar below 50 mg/dL, elevated insulin, proinsulin and C-peptide levels.

**Gastrinoma** (Z-E syndrome) is a D-cell tumor that can be located at any place in the pancreas. It can also arise in G-cell of the stomach or in the duodenum. Over 70 percent of these tumors are malignant. They present as recurrent peptic ulcers or ulcers in unusual places, and with diarrhea. The patients have high gastric output with high gastric acidity and elevated gastrin levels.

**Vipoma** (WDHA syndrome) is an A/D-Cell tumor that can be detected at any location in the pancreas, sympathetic nervous system, or adrenal glands. These tumors are usually malignant and present as refractory watery diarrhea, hypokalemia, and achlorohydria. Vasoactive intestinal peptide (VIP) is elevated in the blood.

**Glucagonoma** is an alpha-cell tumor that is usually present in the body and tail of the pancreas 90 percent of the time. It is malignant in 60 percent of the cases. The patient usually presents with migratory erythema, weight loss, intolerance to glucose (diabetes mellitus), diarrhea, anemia, and stomatitis. The plasma glucagon level is elevated.

**Somatostatinoma** is a Delta-cell tumor that can present at any part of the pancreas. It is almost always malignant. The patient presents with cholecystitis, steatorrhea and mild diabetes. The plasma somatostatin is elevated.

**Pancreatic Polypeptide** (PP) is an F-cell tumor that is always malignant and presents with liver metastasis. The patient has elevated PP levels in the blood.

Once the diagnosis is made, the anatomical location of the tumor is to be determined. The most important diagnostic approach is arteriography. This usually shows tumor flush and the exact location of such tumor in the pancreas. If this is unsuccessful, the second approach

---

If you have any questions, call or write the Surgical Oncology Program at the University Of Maryland Medical System, Room N13E02, Baltimore, Maryland 21202 (301-328-5224).

will be transhepatic selective venous catheterization for sampling for the peptides. The use of computerized tomography (CT) scanning, ultrasonography, and duodenoscopy with retrograde cannulation of the bile and pancreatic duct are of minimal use. However, CT scanning can be of great help in identifying liver metastasis.

Some of these tumors present in a benign form or even in a localized form, and surgical resection of the primary should be the main approach after localization of the tumor. Exception to this rule is in Zollinger-Ellison syndrome (gastrinoma) where resection of the end organ (the stomach), in the form of total gastrectomy, is the ideal approach. Metastatic islet cell tumors are managed by chemotherapy that consists of streptozotocin alone or in combination with 5-Fluorouracil or adriamycin with a response rate of 20 to 30 percent for a duration of 2 to 3 months.

Finally, I should point out that pancreatic islet cell tumors, carcinoid tumors, and tumors of the multiple endocrine neoplasia syndromes belong to the peripheral neuroendocrine APUD (amine precursor uptake and decarboxylation) system, which can synthesize amines and polypeptides.

***Proferred Reading:***

Elias EG. The pancreas & periampullary area, in *Handbook of Surgical Oncology,* Elias, E.G., editor. Boca Raton, FL: CRC Press, 1988.

*Tumor Conferences are held weekly on Tuesday between 8-9 am in Room N13E28 at the University of Maryland Medical System. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

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## One Minute with Diabetes

*Doctor, I have been trying to read "package labels" to help in the management of my diabetes and the information provided is confusing. Can you help me?*

The Food and Drug Administration is responsible for the labeling on all foods except meat, poultry, and egg products, which are regulated by the US Department of Agriculture. In 1975 the FDA required food labels to provide the following information: name of product, net content or net weight, and name and address of the manufacturer or distributor. Some supplemental regulations have been issued over the years since 1975.

While labeling is useful for educating the public, it cannot be a substitute for nutrition education. Nutrition labeling and nutrition education programs can complement one another. Labels help the consumer understand the content of products purchased and especially help people with diabetes and many other medical problems.

It is not possible to explain briefly all one needs to know about interpreting package labels. This must be done in a class situation with many different food products to evaluate.

Package labels usually are divided into several segments:

1. Servings per package
2. Calories per serving
   Protein
   Carbohydrate
   Fat
   Sodium and Potassium (minerals), although listed here, have no caloric content
3. Percentage of US Recommended Daily Allowances (USRDA) vitamins and minerals. This portion of the label can be ignored if one is consuming a balanced meal plan.
4. Ingredients in descending order of predominance by weight. For example, the first listed ingredient is present in greater amount than the second and so on down the list.

Of the four segments, the most important for patients with diabetes are the first two: servings per package and calories per serving (protein, carbohydrate, and fat). This information is needed to construct a meal plan.

A statement often on the label and confusing to the consumer is "No sugar added." This does not mean the product contains no sugar or carbohydrate. It means the manufacturer added no sugar in preparing the package. If milk, sugar, margarine, or other ingredients are added in preparing the food for the table, the caloric content of the serving is increased and must be included in the calculation of the meal plan.

Reading and understanding package labeling are essential for the proper management of diabetes. This can be accomplished under the supervision of a dietitian or nutritionist.

*DeWITT E. DeLAWTER MD*
Editor

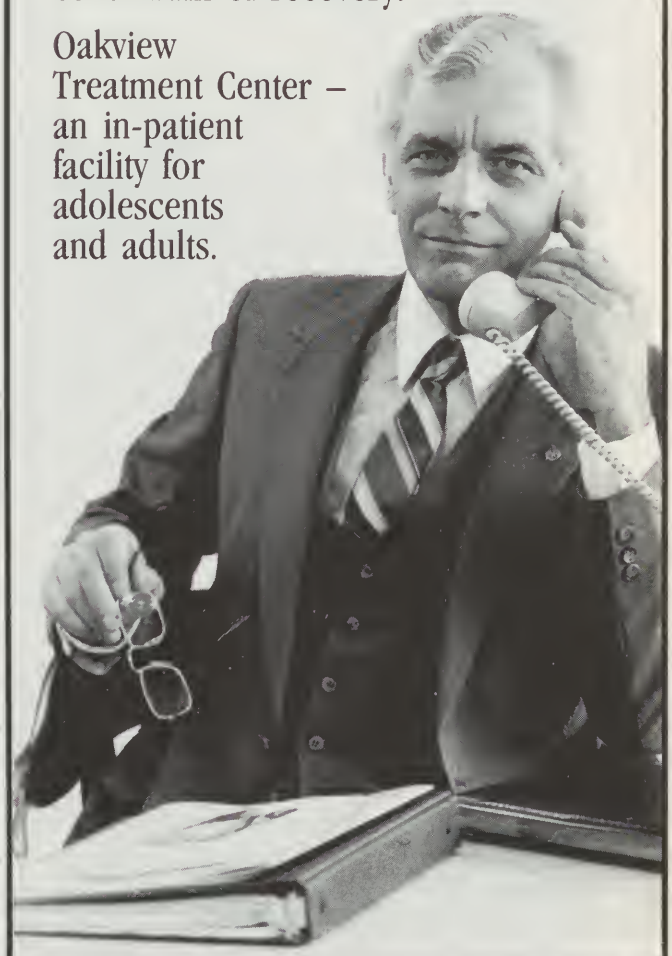

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*Three generations of Baltimore physicians. Portrait on wall is Aaron Friedenwald, M.D. for whom the Faculty's Friedenwald Room is named. Right to left below are his three sons, Julius Friedenwald, M.D, Harry Friedenwald, M.D., and Edgar Friedenwald, M.D.. Seated on the desk is Jonas Friedenwald, M.D., son of Harry Friedenwald. Aaron Friedenwald, M.D., was one of the first clinical eye specialists in Baltimore. His son Harry and grandson Jonsa were prominent Baltimore Ophthalmologists. All were active members of the Medical & Chirurgical Faculty.*

# Library Dedication: Another New Milestone

*JOSEPH E. JENSEN*

On Saturday, September 24, 1988, as part of the activities associated with the semi-annual meeting of the House of Delegates, the Faculty will dedicate its renovated medical library. The dedication will mark the completion of the restoration begun in 1985 of the Faculty's two Cathedral Street buildings. Construction on the former School 49 was completed a year ago. The new building was dedicated at last year's semiannual meeting.

The library facilities now include a reading room with current medical books and journals. The reading room was the result of the restoration of the original Friedenwald room on the third floor. Years ago the room was divided into two offices, and much of the original woodwork was covered over. Faculty staff have restored the paneled room, which will serve as a quiet area for catching up on recent medical publications. The room also will serve as a formal setting for small meetings. Portraits and memorabilia from the Friedenwald family will be displayed in the room that once more will be known as the Friedenwald room.

The current book collection houses the latest editions of significant English language medical textbooks. The stacks are open and accessible to Faculty members. Close by are the librarian's office and the reference department along with the computers that operate MEDLINE. Across the hall in the new building is the technical services department.

The gem of the restoration work is the large reading room on the second floor. The old reading room has been beautifully redone with built-in ten-foot bookcases. The room will house significant parts of the rare book and history of medicine collection, and will be named in memory of Dr. Louis A.M. Krause in accord with a 1974 resolution of the Faculty's House of Delegates. Dr. Krause, a clinician, medical school teacher, and medical historian, served as Chairman of the Faculty's Library Committee from 1952 until 1968.

The room will be furnished with items from Dr. Krause's house, donated by his sister. Furnishings also will include exhibit cases with samples from the Faculty's collection of antique medical instruments.

In conjunction with the dedication of the historical room to Dr. Krause, the Faculty's library will be designated an international clearinghouse for literature and information on the medical problems of performing musicians. This honor has resulted from the efforts of Ms. Susan Harman, the Faculty's Associate Librarian who is also a musician. Ms. Harman's articles about the medical problems of musicians, and her exhaustive bibliographies on this topic, first published in the *Maryland Medical Journal*, are cited nationally and internationally for their excellence.

It is most fitting this should occur in conjunction with the memorial to Dr. Krause, who in addition to his profession and other interests, played the piano and violin. Dr. Krause's piano and violin are among the items being donated to furnish the Louis A.M. Krause MD History of Medicine room.

All these activities coincide with a weekend of special programs sponsored by Baltimore's Peabody School of Music and the Baltimore Symphony Orchestra related to Music and Medicine. Dr. Alice G. Brandfonbrener, a Chicago internist known for specializing in treating the medical problems of performing musicians, is participating in the weekend's events and will be the Faculty's guest at the House of Delegates. Both the Symphony and the School of Music will sponsor special musical programs in conjunction with the weekend.



*Louis A. M. Krause, M.D. (1896-1975). Chairman of Med-Chi's Library committee between 1952-1968. Dr. Krause's accomplishments included renown as physician, clinical teacher, medical historian, lecturer, archaeologist and biblical scholar.*

*To grow up in an atmosphere of books is indeed a privilege. Those who have had this opportunity should be ever grateful. . . . Most of us in medicine are craftsmen, and books in great measure are our tools . . . .*
*One can readily distinguish between the doctor who is keeping one foot in the library and is constantly in touch with current medical literature, as contrasted to the doctor who has little or no interest in medical literature*

*The Medical and Chirurgical Faculty at its outset dedicated itself to the improvement of its members. This certainly was the spark or germ that initiated the collection of books we have in the library.*

LOUIS A.M. KRAUSE MD
"The Library's Importance; Editorial"
*Maryland State Medical Journal*, October 1954.

Mr. Jensen is Associate Executive Director at Med-Chi.

# Information for Authors

*Med-Chi members reading papers before organizations, are invited to submit their papers to the MMJ for consideration for publications.*

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Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the reviewing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to *Index Medicus*, volume number, first and last page numbers, and year of publication. For more extenisve information about preparing medical articles for publication, the editors suggest the International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Illustrations are material that cannot be set in type. Photographic material must be submitted as high-contrast, glossy prints. Drawings and graphs must be done professionally in india ink on high-grade white drawing paper. *Omit illustrations that do not increase understanding of text, and limit them to a reasonable number.* Four or fewer illustrations should be adequate for a manuscript of 4 to 5 typed pages. Legends are to be typed on a separate sheet of paper. Type on a gummed label and affix to the back of each illustration: figure number, title of manuscript, name of senior author, and arrow indicating top. Legends for illustrations should be typed on a separate page with numbers corresponding to those on the photographs and drawings. *Cost of printing color* photographs must be borne by the author.

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# Physician Discipline: A Continuing Challenge

*ANGELO J. TROISI FACHE and GERARD E. EVANS Esq.*

**On July 1, 1988, the Board of Medical Examiners and the Commission on Medical Discipline ceased to exist as two separate entities, and in their place is the Physician Quality Assurance Board established by passage of Senate Bill 508.**

**Like any new statute, the law that established the Physician Quality Assurance Board is not a complete blueprint of each aspect of physician credentialing and discipline. It does not set forth the peer review process in exact detail but rather provides a statement of public policy to be finally and completely assembled by decisions of the Physician Quality Assurance Board itself. Although in some areas the statute made very clear policy statements, the statute also provided the Board with great latitude, discretion, and flexibility.**

In order to understand what changes were made by the passage of SB 508 it is important to know why it became necessary for change. Like many issues that are debated and settled in the public forum, there is a fine and often blurry line between a problem that is addressed as a factual issue and the perceptions surrounding the issue. Although it may seem that only the facts need be studied to appropriately deal with a situation, often the *perceptions* dominate public debate. After all, the public (which includes the media and the legislature) is rarely cognizant of the facts. So it was in this as in other publicly debated issues that the facts were subordinated to sensationally charged perceptions.

During the 1987 Maryland General Assembly, as part of the passage of tort reform legislation, a Joint Legislative Committee comprised of both Senate and House members was created and called the Joint Tort and Insurance Oversight Committee. In creating the Committee the Legislature charged it to examine the effects of Tort Reform law, monitor the insurance industry, and generally study issues that affect the malpractice insurance crisis. The Committee began to hold meetings and public hearings during the 1987 legislative interim. Recommendations from the Committee were to be reported to the General Assembly before the 1988 Session convened. One such hearing was held in the first week in October 1987. This hearing was the catalyst that began a series of events culminating in the Physician Quality Assurance Board.

## October Hearing

The subject of the October hearing concerned the physician discipline system, and so the Joint Commission requested that the Commission on Medical Discipline make a presentation. The presentation of physician peer review and discipline by the Commission was less than complete; indeed it was incomplete.

In the Commission's defense, however, they included only specific cases they had received and responded honestly and objectively to all questions asked of them. Unfortunately, the impression left with the Joint Tort and Insurance Oversight Committee was that Maryland's system of disciplining physicians was inefficient and ineffective.

The total caseload given by the Commission did not include all actions taken by physicians in monitoring physicians. For example, the Commission made no mention of the Med-Chi Physician Rehabilitation Committee, which does an excellent job in working with impaired physicians. Likewise, the Commission did not explain several other important components of the physician peer review system such as the Board of Medical Examiners, the Med-Chi Drug Committee, and the Med-Chi Physician/Patient Relations Committee. All these groups play an active role in monitoring, reviewing, counseling, and where appropriate, disciplining physicians in Maryland. The picture painted by that testimony was fragmented and disjointed, offering inadequate answers to questions that were of critical concern.

After the meeting, many legislators were impressed with the need for a vast overhaul of the physician credentialing and disciplining process. One member of the Oversight Committee said, "The only problem with the physician disciplining system is that it is dominated by physicians." This sentiment spread like wildfire through parts of the Maryland Legislature.

A flurry of press activity condemning the physician peer review system followed the Annapolis hearing. Several articles used the incomplete data released by the Commission on Medical Discipline to inappropriately rank Maryland 48th among the other several states in action taken against physicians (actually, Maryland would have ranked third in the nation if the complete picture of peer review had been reported and if such comparisons could be made). The media hype provided ample fuel for our detractors in calling for the removal of physicians and particularly the State Medical Society from the peer review process.

In the weeks that followed, Dr. Sidney Wolfe, members of the Plaintiffs Bar, "consumer" advocates, as well as some legislators began to circle what was perceived to be a "wounded fish." During these dark days in late fall of 1987, each week a new and different solution to this "problem" surfaced. This was a time of great activity for

Mr. Troisi is the Executive Director and Mr. Evens is General Counsel for the Medical and Chirurgical Faculty.

those who would seek to extract physicians and Med-Chi from the peer review process. Many critics of the peer review role played by physicians agreed that a panel of attorneys, after receiving testimony from paid medical experts, would be much more capable of rendering fair decisions than would members of the physician community. This wisdom seemed to be a growing trend; some states having adopted this view in fashioning physician disciplinary systems.

Others suggested that full-time physician employees of the Maryland Department of Health and Mental Hygiene (DHMH) would be more appropriate judges of the standard of medicine to be offered in the state. In this manner the entire regulation of the private practice of physicians could stay in the Department of Health and Mental Hygiene. Proponents of this solution argued that their "independent" physicians would guarantee impartial and competent physician reviewers.

Still others professed that the Attorney General's Office was more than able to investigate and adjudicate questions of physician competence. Several members of the Attorney General's staff declard that questions involving the relationship between a physician and a patient are in the realm of consumer complaints and already under the jurisdiction of the Attorney General's Office of Consumer Affairs. Although the Attorney General's Office has a fine reputation for resolving complaints concerning tangible retail products and other such specific issues, investigating and resolving medical issues is an altogether different endeavor. However, the Attorney General's Office remained unswayed and continued to push for control of the peer review system throughout the legislative session.

Med-Chi strenuously objected to the placement of peer review anywhere but in the hands of practicing, community based physicians. The Medical and Chirurgical Faculty has been policing the practice of medicine since before the Department of Health and Mental Hygiene or the Attorney General's Office existed. The countless hours of competent, dedicated work provided to the State of Maryland free of charge by the physicians of Med-Chi has been an invaluable service of unquestionable integrity. The Commission on Medical Discipline had been hampered since its inception with inadequate funding and staffing, and in order for changes in the physician credentialing and discipline system to be meaningful, the state had to make a substantial commitment in terms of resources available. This commitment was agreed to by Governor Schaefer and the DHMH.

As the 1988 Maryland General Assembly rapidly approached, Med-Chi representatives began a series of exhaustive meetings with the DHMH, the Attorney General's Office, Governor Schaefer's Office, and key legislative leaders. The meetings were a futile attempt to reach a consensus before the beginning of the Session. It was hoped that by developing a consensus before the Session began, we would have a better chance at preempting any other (perhaps more damaging) legislative initiatives. Further, key legislators could be briefed before the session, offering a chance to solidify early support.

Eventually the DHMH put down on paper a reorganization plan calling for the creation of a Board of Medicine, headed by a small group of prominent physicians and staffed by a physician medical director. The Board of Medicine would have incorporated as subcommittees the Board of Medical Examiners and the Commission on Medical Discipline as they were then in existence. The plan seemed to offer some promise in that it carried with it a substantial commitment of resources. Unfortunately, some physicians appeared at various public forums and attacked the reorganization, charging that plan was an attempt on the part of the DHMH to "take over" the practice of medicine. This original proposal died of neglect, having gained little support in the physician community. As the 1988 Maryland General Assembly convened, there existed no formal reorganization scheme.

### 1988 Session

During the initial days of the 1988 Maryland General Assembly, Governor Schaefer decided quick action was needed to fend off other legislative intiatives altering the physician peer review and credentialing system. The Governor decided that a combination of the existing Commission on Medical Discipline and the Board of Medical Examiners was necessary to better coordinate what he believed to be related state functions. Further, he made it quite clear that physicians who had been convicted of crimes involving moral turpitude deserved swift and sure action against their licenses. Lastly, the Governor insisted that his legislative proposal have as its foundation the basic premise that the Medical and Chirurgical Faculty would continue to play an integral role in the credentialing and peer review system. Although further details of the legislation are explained in the words that follow, these major items were of prime concern to Governor Schaefer.

The legislation was introduced as HB 855 sponsored by Speaker Mitchell in the House of Delegates and SB 508 sponsored by Senator Miller in the Senate. The legislation was assigned to the Senate Economic and Environmental Affairs Committee and the House Environmental Matters Committee. During the many hearings, discus-

sions and deliberations on the legislative amendments were offered that would have compromised the individual physician's stature in the system.

Many attempts were made through the amendment process to completely extricate the Medical and Chirurgical Faculty from the process. Other attempts were made to stack the new Board with consumer members by removing physician representation. One such amendment failed on the floor of the Senate after a dramatic hour-long floor debate with the final vote being cast by the President of the Senate, Thomas V. Mike Miller, Jr. in favor of the physicians of Maryland.

Not a day went by that did not uncover a new plot to gut physician control of the Physician Quality Assurance Board. It must be said that the leadership of the House and Senate, Speaker Clay Mitchell and Senator Mike Miller in particular, were unrelenting in their defense of physicians and the Medical and Chirurgical Faculty and, more important, the good of the citizens of Maryland. On more than one occasion the Speaker and the President exerted their personal influence in keeping the legislation on track and unmolested.

### Highlights of the Legislation

Examining a breakdown of the manner in which cases will be channeled will prove instructive.

First, one of the largest single classifications of cases filed at the Commission on Medical Discipline is fee disputes. Overcharging complaints represent about 25 percent of all cases. The statute is quite specific in requiring that these complaints are to go directly to Med-Chi without preliminary investigation. It is planned that Med-Chi will conduct peer review investigations of these cases to determine not only if fees charged were exorbitant but also, more importantly, whether appropriate care was rendered.

The second large category of cases involved what the new law defines as "standards of medical practice." These "standards" cases would include cases involving charges of incompetence, unprofessional conduct, etc. This category comprises the great majority of complaints against physicians, and these cases are to receive a preliminary investigation before being sent to Med-Chi, based on the discretion of the new Board. However, if the Board determines that a case involves standards of medical practice, the statute states the case shall be sent to Med-Chi for further investigation and peer review among the appropriate medical specialties.

This means the Board must first define which of the existing grounds for disciplinary action involve standards of medical practice. In other words, Med-Chi retains its traditional role in peer reviewing physicians in all cases involving competence, professional conduct, etc. It should be noted that local component medical societies were left out of the original draft of the legislation, and only after Med-Chi indicated the indispensable nature of this resource did the provision survive.

Much has been said about the use of investigators and hearing officers in the new system. It is important to remember that the previous statute allowed the former Commission on Medical Disipline to hire investigators and hearing officers to help in the resolution of cases. The new law only activates this provision. The investigator and hearing officers will be assigned to the Board and will not be part of the DHMH's central unit. This means they will be accountable to the Physician Quality Assurance Board. Remember, too, that the investigators will perform preliminary investigations as necessary. Again, the Board has the discretion in deciding what is necessary and what is not. Preliminary investigations means just that, that is, the collection of records, the conduction of interviews, and the like. The role of investigators should work as a support function of Med-Chi peer review at the Board's discretion and should be done for appropriate cases.

Third, and perhaps most important in terms of public awareness although certainly not in numbers of cases, are situations in which physicians have been convicted of crimes of moral turpitude. Although very limited in number, these cases get the most media attention. Similarly, these cases seem to incite emotional outbursts and indignation from the public.

One of the witnesses who testified before the House Environmental Matters Committee was the victim of sexual harrassment perpetrated upon her by her physician. The physician was found in violation of acceptable standards of professional conduct. However, the woman testified that the punishment handed down by the Commission was insignificant given her emotional distress. Her emotional testimony fell on sympathetic ears.

The Legislature was exposed to several other physicians who met with what was reported as "kid glove" treatment by the Commission on Medical Discipline. One celebrated case was a physician who was found guilty in the Circuit Court for Baltimore City of raping a patient. The Governor insisted and all would agree that physicians who have been convicted of such crimes should be dealt with sternly. Although the term "moral turpitude" eludes an exact definition, we know from case law that situations of rape and drug distribution are clearly crimes of moral turpitude. The definition, however, does not include crimes such as income tax evasion.

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### The New Board

The new Physician Quality Assurance Board will be composed of 15 members. All members will be appointed by the Governor. Ten members will be selected from a list submitted by the Medical and Chirurgical Faculty. The eleventh member must be a physician, and the Governor has the discretion to select an individual of his own choosing. All physician members must be "practicing" physicians. The twelfth member of the Board will be selected by the Secretary of the Department of Health and Mental Hygiene. The last three members of the Board will be consumer representatives confirmed by the Senate of Maryland. One of the consumer representatives will be recommended by the Maryland Hospital Association. The Medical and Chirurgical Faculty continues to exercise the exact percentage of control over the new Board as it enjoyed over the combination of members serving on the former Commission on Medical Discipline and Board of Medical Examiners.

Perhaps the most important feature of the new law and an aspect vigorously attacked throughout the legislative process was the elevation of the standard of evidence necessary to find a physician in violation of the law. Under the Commission on Medical Discipline's system, evidence compiled against a physician was judged against a legal standard known as the "preponderance" of the evidence. Preponderance of the evidence generally is referred to as the civil standard of evidence and in quantitative terms corresponds to about 51 percent. On July 1, 1988 the evidentiary standard necessary to find a physician in violation of the law was raised to "clear-and-convincing" evidence. Clear-and-convincing evidence is a substantially higher burden placed upon the prosecutors of physicians and therefore provides further protection. The clear-and-convincing standard is used by the Maryland Attorney Grievance Commission in judging evidence against attorneys. It seemed only fair that physicians be afforded a similar procedural safeguards as attorneys.

As of this writing the newly created Physician Quality Assurance Board has yet to meet. The flexibility and discretion the new law provides to the members of this Board will allow the Board to shape the environment for the practice of medicine in Maryland. The law was carefully crafted so that the physician members of the Board had both the autonomy and the authority to act with broad powers. Although the furor surrounding the legislative fight that secured this new system has died, opponents to a physician-dominated peer review and credentialing process are anxiously waiting to examine the activity of this Board. Governor Schaefer and the Legislature have affirmed their faith and trust in the individual practitioner through their support of this legislation. And they, too, will be closely watching the Board's performance. As the Faculty's founders accepted these same challenges in 1799, it is the right, duty, and obligation of all physicians in Maryland to carry on this rich and justly deserved function of peer review.

# ATTENTION ALL MEMBERS

A dedication ceremony of Med-Chi's newly renovated library and Krause Reading Room will be held on Saturday, September 24, 1988 at 1 p.m. in conjunction with the Semiannual session of the Council (10 a.m.) and House of Delegates (2 p.m.).

It will be a day of special activities including a chamber music concert featuring advanced students from the Peabody Conservatory of Music beginning at 1:15 p.m. A light buffet and tour of Med-Chi's library facility and building will begin at 12 noon.

Free parking will be available at the Symphony Parking Garage and parking tickets will be validated at Med-Chi's reception desk.

Saturday evening at 8:15 there will be a Concert featuring the Peabody Symphony Orchestra at the Peabody Institute, 1 East Mount Vernon Place. On the podium will be the dynamic young conductor of the New Jersey Symphony Orchestra, Hugh Wolff, who is a Peabody alumnus. **Complimentary tickets are available to members who reserve them in advance by calling 659-8138 during weekday afternoons.**

For those traveling from outlying areas the Faculty has made special provisions: hotel rooms at the Stouffer Harborplace Hotel overlooking Baltimore's Inner Harbor are available at the special discount rate of $99 (the normal rate is $155 per night). Reservations can be made by calling 547-1200 (tell them you are with Med-Chi). The hotel, which is part of the Galleria complex (a beautiful and unique shopping mall), offers a health and fitness club that includes an indoor swimming pool and a lovely rooftop garden.

Baltimore, a city with a history as big as its heart, has many major attractions, parks, landmarks, and cultural institutions for a variety of diversions. Come, bring your family, and join us in celebrating the distinguished history of the Med-Chi library and then participate in the activities in downtown Baltimore.

On the next page is a listing of special attractions in Baltimore during the September 23-25 weekend.

| | |
|---|---|
| National Aquarium in Baltimore | Pier 3, Pratt Street 576-3810<br>Open Saturday, 10 a.m. - 5 p.m.<br>Admission - Adults $7.75, Students and Senior Citizens $6.00, Children $4.75, Children under 3 are free |
| Baltimore Zoo | Druid Hill Park 366-LION<br>Open Daily 10 a.m. - 4:30 p.m.<br>Admission - Adults $4.00, Children and Senior Citizens $2.00 |
| U.S. Frigate Constellation | Docked in the Inner Harbor 539-1797<br>Open Daily 10 a.m. - 6 p.m.<br>Admission - Adults $2.00, Children $1.00<br>Children 5 and under are free |
| Maryland Science Center | 601 Light Street 685-5225<br>Open Saturday - 10 a.m. - 6 p.m.<br>Admission - Adults $6.50, Children and Senior Citizens $5.50 |
| World Trade Center | Pratt Street 837-4515<br>27th Floor Observation Level Panoramic View of the City and Inner Harbor also History of Baltimore Museum<br>Admission - Adults $2.00, Children and Senior Citizens $1.00 |
| Clipper City | Docked in Baltimore's Inner Harbor 539-6277<br>Reservations accepted and recommended for daily sails and also sunset and moonlight cruises<br>Admission - Adults $18.00-$32.00, Children ages 12-16 $9.00, under 12 $2.00 |
| Antique Row | 700 & 800 block of N. Howard Street and the 200 block of W. Read Street<br>Open Monday thru Saturday |
| Myerhoff Concert Hall | 1212 Cathedral Street 783-8000<br>Pops Concert; Skitch Henderson and Larry Adler - 8:15 p.m.<br>Admission - $13.00-$32.00 |
| Walters Art Gallery | 600 North Charles Street 547-ARTS<br>Open Daily 11 a.m. - 5 p.m.<br>Admission - Adults $2.00, Senior Citizens $1.00, Under 18, Students & Members are free |
| Baseball | Baltimore Orioles vs. Detroit Tigers at Memorial Stadium 243-9800<br>September 23 - 8:05 p.m.<br>September 24 - Time To Be Announced<br>33rd Street & Ellerslie Avenue<br>Admission - $4.75-$9.50 |

Pick up a copy of the Baltimore Scene at our reception desk the day of the dedication for more information on sightseeing, dining, entertainment and shopping.

# Trauma — Another Subspecialty in Anesthesiology?

*C. G. HECKEL MD, JD*

In the July issue of *MMJ*, Grande, Stene, and Barton from the Maryland Institute for Emergency Medical Services Systems suggest that trauma anesthesia be recognized as a subspecialty within anesthesiology. The anesthesiologist who has watched the development of subspecialization over the last twenty years may well feel ambivalent about this; there are valid arguments for this development and for the proposition that it would be better if it did not.

The specialty areas that now exist in anesthesiology are defined in one of two ways. Either they are centered on concern for a wide variety of problems involving a single physiologic system for example, the heart or brain), or they deal with the problems affecting a particular category of patients who even under normal conditions differ physiologically from the majority of the population (pregnant women and children).

"Traumato-anesthesia" attempts to deal with all problems of a patient with a specific disease, in whatever organ systems they may occur. It can be argued by those jealous of subspecialty "turf" that this approach rides piggyback on the basic physiologic and anesthetic approaches developed by the other subspecialties and is only a synthesis of their approaches: "engineering" done with their basic techniques rather than from an independent scientific base. There is also the question of the extent to which it is possible for one practitioner to consistently maintain this synthesis (to be "all things to all men") and do it in the multiple environments of trauma stabilization area, operating room, and intensive care unit.

It can be pointed out that increasing subspecialization presents manpower problems for a specialty that is still underpopulated in some respects. Can we afford to mark off yet another area and restrict it to a small group of specialists? Does this fragmentation suggest a level of care that can be argued legally as "the standard of care" when convenient in tort litigation but cannot reasonably be provided to all patients at present time?

Perhaps the most serious concerns arise with respect to the traumato-anesthetist himself. Can he (or she) maintain the drive to do this kind of work over a career, or will there be significant "burnout" from continuous contact with our most tragic patients, the basically normal, healthy persons battered and sometimes severely deformed by their injuries? If full-time practice of traumato-anesthesia spreads from medical training centers with the creation of nonacademic trauma centers, the pressure of full-time traumato-anesthesia practice without the relief of the academic aspects of a medical center may lead to considerable "burnout" in personnel, as it does in critical care nursing. In addition, will there be reasonable lateral mobility within the specialty for anesthesiologists who decide they have had as much as they can bear of acute trauma? Combat stress syndrome (or its medical equivalent) would seem more likely in this area than in other anesthetic subspecialties.

Related to this is the question of how many traumato-anesthetists we need and how fast to train them. While it is desirable for every trauma victim to have access to a trauma center and specialized care within minutes of injury, the realities of communications, distance, and time will make extension of this service increasingly costly as it moves away from areas of relatively dense population, such as the East Coast "strip." The limits that eventually appear and the need for "burnout" replacements will determine how many traumato-anesthetists are needed; but how fast should we try to build up the numbers while we are finding out?

In favor of the proposal of the MIEMSS group is the dramatic improvement in patient outcome that can be produced by organized team treatment of severe trauma. Where density of population and trained personnel allow us to make use of the "golden hour" when resuscitation and acute treatment can salvage the severely injured for definitive treatment, centers like MIEMSS have demonstrated this clearly. While keeping in mind the problems suggested above, it seems clear that some anesthesiologists will concentrate in the area of traumato-anesthesia, and training programs should recognize this by including formal exposure to trauma care. A useful beginning would be for anesthesiology residency programs to include Advanced Trauma Life Support (ATLS) training as a required element in their first year. This would provide an introduction to the subspecialty for those who might then become traumato-anesthetists as well as to improve the trauma care skills of all anesthesiologists who finish training and enter practice.

The road for traumato-anesthesia is not necessarily smooth, and some of the problems may not be clear to the advocates of trauma care and EMS, as is true of most enthusiasts. For example, the authors suggest increased involvement of anesthesiologists with EMS training, specifically with training of paramedical personnel in tracheal intubation. Intubation training presents not so much a legal problem as an ethical one. Concern for patient autonomy, a fundamental principle of medical ethics, requires that lay or paramedical personnel not be allowed to practice intubation on a patient without his/her express consent. Many anesthesiologists, especially in smaller communities, find this consent difficult to obtain. It is even harder at times to predict just when a consenting patient will appear so that training can be scheduled. Thus ethical and practical problems may

The author is in the Department of Legal Medicine, Armed Forces Institute of Pathology, Washington, D.C.

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complicate what appears to be a desirable technical development.

But even given some caveats, it seems that a technological imperative is at work here. The economic principles of division of labor and specialization are clearly evident in the results of centers like MIEMSS. Traumato-anesthesiology is here as a de facto subspecialty in these centers, although its eventual form and manpower requirements in the specialty at large are not certain. We can look to the group at MIEMSS to ask some of the questions and produce some of the answers, as they have done in the July issue of *MMJ*.


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# HIV in Women and Their Pregnancies

*ANNE WEBER MD and LINDSAY S. ALGER MD*

**Women account for a significant percentage of all AIDS cases. HIV seropositive patients who become pregnant may be at risk for greater morbidity and mortality than nonpregnant individuals. Women with HIV infection are the major source of infants with AIDS. It is essential, especially in areas of high prevalence of HIV, to maintain a high degree of suspicion for HIV-related disease in women and to maintain standards of infection control to prevent occupational transmission of HIV. Most important, all patients must be provided with information so that transmission of HIV can be prevented.**

By December 18, 1987, over 40,000 cases of the acquired immunodeficiency syndrome (AIDS) were reported to the Centers for Disease Control (CDC).[1] It is estimated that 1.0 to 1.5 million Americans are seropositive for the human immunodeficiency virus (HIV), the etiologic agent of AIDS.[2] Since these individuals may eventually develop AIDS, it is clear that the peak of this problem has not yet been reached. Managing this issue will remain one of the most compelling challenges of our time.

AIDS in women is of special concern. Although the percentage of women affected with AIDS remains relatively low (6.9 percent of reported cases[3]), the occurrence of AIDS in women is significant for several reasons:

1. Women who carry the AIDS virus may transmit the virus to their offspring in utero and thus are the major source of infants with AIDS. Perinatal transmission accounts for over 75 percent of pediatric AIDS cases.[4] If we can reduce the number of women becoming infected with HIV as well as educate those identified as seropositive so they may avoid pregnancy, most cases of pediatric AIDS can be prevented.

2. Seropositive women who become pregnant may be at particular risk since the immunosuppressive effect of pregnancy may result in more rapid progression of their disease.

3. Other than intravenous drug use, the only other major route of transmission of AIDS to women is through heterosexual contact with men who have AIDS or who are at risk for AIDS. The percentage of women who have acquired AIDS through heterosexual contact has more than doubled from 1982 to 1986.[5] Epidemiologically, following infection rates in women will be an important means of tracking the spread of AIDS in the heterosexual population.

Every health professional involved in the care owomen, their sexual partners, and their children need to be aware of the impact of HIV infection on the present and future health of patients. Dissemination of this information is a vital step toward the prevention of further spread of the AIDS virus.

From the Department of Obstetrics & Gynecology, University of Maryland School of Medicine, 22 South Greene Street , Baltimore, MD 21201.

## The Agent

Human immunodeficiency virus (HIV),6 previously called lymphadenopathy-associated virus (LAV), human T-lymphotropic virus type III (HTLV-III), and AIDS-associated retrovirus (ARV), has been identified as the etiologic agent of AIDS. It is a retrovirus known to replicate in certain cells in the human body, including lymphocytes, macrophages, and cells of the central nervous system.

The abnormalities of the immune system described in AIDS are the result of selective infection of lymphocytes by the virus, specifically the subset of helper T cells (T4). This causes a dramatic decrease in the relative and absolute number of helper T cells and a relative preponderance of suppressor T cells (T8). The T4/T8 ratio, normally greater than 2.0, is reversed to less than 1.0 in association with AIDS. Other changes include abnormalities of B cell activation and function, with inability to produce specific antibody associated with hypergammaglobulinemia; and abnormalities in monocyte functioning of antigen processing, chemotaxis, and cytotoxicity.[7] This leads to a profound suppression of the immune system.

## High-Risk Groups

Epidemiologic studies have identified certain groups at increased risk for AIDS. In men, these groups largely have consisted of promiscuous homosexual males, intravenous drug users, and hemophiliac recipients of Factor VIII concentrates. Recently, this list has been expanded to include men with heterosexual contact with women who have AIDS or who are at risk for AIDS.[8,9] In addition, anyone receiving a blood transfusion, especially prior to mid-1985 before blood products were screened for HIV, may be at increased risk for AIDS.

The CDC has identified those groups of women at increased risk for AIDS as:

- intravenous drug users
- women who have emigrated within the past ten years from countries where heterosexual transmission is thought to play a major role (Haiti, countries of Central Africa, especially Zaire and the Congo)[10]
- prostitutes

- women who are or have been sexual partners of men at high risk
- women from a community of known high prevalence of HIV [4]

These risk factors are often interrelated. High prevalence of HIV is known to exist in New York, New Jersey, and Florida. As of March 1987, 70 percent of AIDS cases in women have occurred in these three states.[11] However, the percentage of cases occurring outside these geographic areas is increasing. Areas of previously low incidence report significant rates of HIV infection in both urban and rural communities. For example, of 112 gay and bisexual men in New Mexico, one in seven was seropositive for HIV.[12]

Statistics from New York City in 1986 indicate that of the approximately 200,000 intravenous drug users in the city, 30 percent are women.[13] Almost all these women are sexually active; often their partners are also at high risk for HIV infection due to intravenous drug use. In addition, up to half the intravenous drug-using women in New York City engage in prostitution. This not only increases their risk of contracting HIV infection by exposure to many potentially infected contacts, but it also increases the likelihood that they, if infected, will transmit the virus to others.

Furthermore, 90 percent of women who use intravenous drugs are in their childbearing years.[13] It has been shown that epidemiologic trends of AIDS in women can be used to predict future trends of AIDS in children.[5] In New York City alone, it is estimated that 1,500 children are born each year to women in methadone programs; four to five times that many are born to addicted women not in treatment programs.[13] At King's County Hospital Center in Brooklyn, New York, one in 50 infants is delivered from HIV- infected mothers.[14]

Epidemiologic studies have identified racial trends in women at risk for AIDS. The cumulative incidence of AIDS in black and Hispanic women is more than ten times that in white women.[11] Whether this is the consequence of intrinsic racial differences or is solely a manifestation of socioeconomic differences remains controversial.

Specific risk factors also have been identified for children. These include a parent in a high-risk group; exposure to AIDS-contaminated blood, blood products, or breast milk; and sexual abuse or drug abuse.[15]

## Modes of Transmission

HIV has been isolated from body fluids including blood,[16] semen,[17] vaginal fluid,[18] tears,[19] saliva,[20] and breast milk.[21] Epidemiologic studies suggest that those fluids primarily involved in transmission include blood, semen, and vaginal secretions.

The virus can be introduced into the body at a variety of sites, including the penis (presumably via the urethra), the vagina, the rectum, and the circulatory system by venous access or through open wounds of the skin. The oral mucosa is relatively impermeable to HIV[22] and the absence of reports of transmission through unbroken skin suggests relative protection by intact integument.

**Blood Borne Transmission** Epidemiologic studies suggest that intravenous inoculation with HIV is the most efficient means of transmission. The infection rate associated with blood borne transmission of HIV appears to depend on the amount of virus received. Blood transfusions from donors who subsequently developed AIDS almost universally result in HIV infection.[23]

Even the small amount of contaminated blood received from shared needles by intravenous drug users results in significant transmission. The reported prevalence of HIV antibodies in intravenous drug users in treatment programs ranges from 50 to 87 percent.[24,25] In particular, intravenous drug use has been the most common mode of transmission of HIV in women, accounting for 52 percent of all cases of AIDS in women between 1981 and 1986.[5]

Infection also may follow inadvertent intravenous exposure. There are several recorded cases of transmission to hospital personnel attributed to contact or inoculation with blood.[26] However, the relative absence of HIV transmission in hospitals, even to those who have received accidental needle sticks from infected patients, is striking and in direct contrast to the high infection rate seen with hepatitis B virus after such accidents.[27] From data collected so far, it seems the risk of transmission of HIV in the occupational setting is very low.[28] In a CDC surveillance project, of 1,097 health care workers with parenteral or mucous membrane exposure to the blood of patients with AIDS or HIV infection, only one had seroconverted as of March 31, 1987.[26]

**Sexual Transmission** Beginning in 1983 with reports of AIDS in wives of hemophiliacs,[29] sexual transmission from men to women has been well documented although reported rates of transmission vary greatly. Heterosexual contact with a person at risk for AIDS is the second most common mode of acquisition of AIDS in women. The proportion of women with AIDS in this risk group increased significantly between 1982 and 1986, from 12 percent to 26 percent.[5] As the prevalence of HIV infection in the population increases, the likelihood of infection in a random partner increases.[30] In the United States at the present time, a heterosexual woman is at greater risk for acquiring AIDS through heterosexual intercourse than is a heterosexual man.

Initially it was suggested that transmission from women to men might be less efficient than transmission from men to women. However, this is not confirmed by data documenting a transmission rate of 71 percent (12 of 17) in male sexual partners of women with AIDS.[8] A case has been reported suggesting that it is even possible for woman-to-woman transmission of HIV to occur through sexual activity.[31]

The exact risk of infection associated with a single sexual encounter with an infected person is not known. Nor is the cumulative risk associated with repeated sexual contact with an infected person known. Depending on a variety of factors such as the mode of aquisition of the virus in the male, duration of seropositivity, severity of illness, and contraceptive method used, heterosexual transmission rates from seropositive men to women who are involved in a stable relationship have varied from 6.8 to 86 percent. If transmission of HIV follows the patterns of other sexually transmitted infections, repeated exposure to an infected person may not be necessary for infection, but the probability that transmission will occur increases with the frequency of exposure. This relationship has been documented by Padian and coworkers who found an association between the total number of exposures to the infected person and the rate of transmission of HIV.[32]

Also unknown is the relationship between the clinical status of an infected person and the ability to transmit the virus. It may be that the more ill a person with HIV is, the greater the risk of transmission of the virus.

It is known that even after repeated sexual contact with a person with AIDS, transmission of HIV may not occur. On the other hand, cases have been reported documenting the transmission of HIV based on a single encounter.[33]

**Perinatal Transmission** Transmission from infected mothers to their infants occurs most commonly in utero. Several studies have documented in utero transmission.[34-38] The virus has been isolated from the internal organs of fetuses aborted prior to 20 weeks' gestation. Additional support is provided by evidence of an in utero insult in affected infants born small for gestational age.[39] The onset of symptoms within a few months of birth also supports the hypothesis of in utero transmission of HIV.[40]

It is also possible for transmission to occur during delivery or postpartum. In the latter instance, a case has been reported in which a mother received a postpartum blood transfusion from a donor who subsequently developed AIDS.[41] The mother developed HIV infection evidenced by seroconversion, lymphadenopathy, and a reversed T4/T8 ratio. The infant, who was breast-fed for six weeks, also became seropositive for HIV. It is presumed that breast-feeding was the route of infection for this infant.

It was first suggested that operative delivery may protect the infant from HIV infection. Chiodo reported that none of five infants delivered by cesarean section became HIV seropositive while three out of seven vaginally delivered infants did so.[42] However, in a study of 24 patients, Semprini found that infants were equally likely to be infected whether delivered vaginally or via cesarean section, the transmission rate being 50 percent with either route.[43] Cesarean delivery offers no advantage to the infant, and HIV infection in the mother is not, in and of itself, an indication for cesarean delivery. Maternal HIV infection is a relative contraindication for amniocentesis, which may introduce the virus into a previously uninfected amniotic cavity.

Perinatal transmission has been documented at rates varying from 0 to 85 percent (Table 1). Current information suggests that overall approximately 50 percent of infants will acquire the virus and that at least 50 percent of these will die from AIDS.[45] Women who have delivered an infected child have higher transmission rates of approximately 60 percent while women without such a history may have only a 30 to 40 percent transmission rate (Table 2). Even when the mother is clinically ill with AIDS during the pregnancy, cases have been reported in which the infant remains unaffected.[49,50] A case has been described involving identical twins, where only one infant was affected.[47]

It is not known what makes one infant more susceptible or resistant to infection than another; it is possible that both maternal and fetal factors are involved. It has been suggested that, for the fetus, the development of HIV-related disease may depend on the infection happening at a critical time in the maturation of the fetal immune system.[35] At this time it is not possible to predict which pregnancies will result in infants infected with HIV.

**Table 1. HIV Vertical Transmission Rates from Mothers to Infants**

| Author | Infants : Mothers | Transmission (percent) |
|---|---|---|
| Chiodo [1] | 3/12 | 25 |
| Rubinstein [2] | 17/52 | 33 |
| Semprini [3] | 12/24 | 50 |
| Ciraru-Vigneron [4] | 11/13 | 85 |

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**Table 2. Vertical Transmission Rates for Women Who Previously Delivered an Affected Infant**

| Authors | Infants : Mothers | Transmission (percent) |
|---|---|---|
| Scott[1] | 4/10 | 40 |
| Rubenstein[2] | 11/17 | 65 |
| Scott[3] | 13/20 | 65 |

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**Miscellaneous** Other modes of transmission have been described in unusual circumstances.[51,52] In theory, contact of infected body fluid with any break in the mucocutaneous barriers could permit transmission. However, no cases of HIV infection have been attributed to casual contact; there is little evidence for transmission in household contacts of AIDS patients.[53] As previously mentioned, the risk of HIV transmission in the occupational setting is low.

## Course of HIV Infection

Although complete information regarding the natural history of HIV infection is not yet available, preliminary reports indicate a very high mortality rate. Of AIDS cases known as of August 10, 1987, 58 percent of the adults and 65 percent of the children have died.[3]

It has been suggested there may be cofactors involved in both the transmission of HIV, and the rate of progression of the disease to AIDS. Many possible cofactors have been proposed, such as pre-existing or concomitant immunosuppression or repeated exposure to the virus or other foreign antigens. Weber *et al.* have reported a strong association between progression of HIV infection in homosexual men and recent or concurrent sexually transmitted diseases.[54] It remains to be elucidated why some individuals progress rapidly to a fatal outcome with AIDS while others continue to carry the virus asymptomatically.

## HIV in Pregnancy

The majority of women with AIDS are of reproductive age, with 79 percent between the ages of 13 and 39 years.[5] Overall, the number of women estimated to be infected with HIV is 70,000 to 105,000. Therefore, up to 84,000 women have the potential to transmit HIV to their infants.

The issue of AIDS in pregnancy is complicated by the physiologic suppression of the immune system in a normal pregnancy. These immunologic changes may explain the survival of the fetus as an immunologically different entity. In pregnancy, there is a decrease in cell-mediated immune responsiveness, as documented by decreased lymphocyte responses to phytohemagglutinin,[55] to a mixed lymphocyte culture, [56] and to soluble antigens.[57] There is a relative and absolute decrease in the number of helper T cells (T4) during pregnancy, which may be associated with thymic involution.[58] The ratio of helper T cells to suppressor T cells (T8) (the T4/T8 ratio) is lower throughout pregnancy and delivery. These changes normalize by the third to fifth month postpartum.[59] The hormonal changes of pregnancy may be invovled in the decreased immune responsiveness. Several hormones including human chorionic gonadotropin, estrogen, progesterone, corticosteroids, alpha fetoprotein, prolactin, and alpha globulin have immunsuppressive effects in vitro.[60] Supporting this evidence of cell-mediated immune suppression in pregnancy is the documentation of an increase in incidence and severity of certain viral infections, including rubella,[56] hepatitis,[61] and Epstein-Barr virus.[62] Of particular interest is the reactivation of latent viruses (for example, cytomegalovirus) that, despite maternal immunity, are transmitted to the immunoincompetent fetus. This may be important in the transmission of HIV to infants from apparently well mothers who are seropositive for antibody to HIV.

It has been suggested that the physiologic immune suppression of pregnancy may be additive or even synergistic with the immune deficiencies associated with AIDS. Individual case reports have documented the rapid progression and high mortality associated with the development of AIDS during pregnancy or when pregnancy occurs in patients with AIDS-related complex (ARC) or AIDS. Causes of death include Pneumocystis carinii pneumonia,[63,64] listeriosis,[65] lymphoma,[66] and disseminated Kaposi's sarcoma.[67]

Women at particularly high risk for poor outcome are those identified as having delivered one or more babies with AIDS. In a study by Scott *et al.*[46] 16 mothers delivered of infants with AIDS or ARC were investigated. All except one mother were clinically well at delivery (one woman had ARC), but all had laboratory evidence of immune dysfunction. During a follow-up period that averaged 30 months, 31 percent of the mothers (5 of 16) developed AIDS and 44 percent (7 of 16) developed ARC. Of women who had a subsequent pregnancy, 45 percent developed AIDS or ARC during that pregnancy.

Minkoff[68] followed 34 mothers delivered of infants with AIDS or ARC. None of the women had a clinical diagnosis of AIDS or ARC during pregnancy. After an average follow-up of approximately 28 months, 15 percent of the mothers (5 of 34) had AIDS and 29 percent (10 of 34) had ARC.

Although these two studies involved small numbers of cases, it might be concluded that the progression to AIDS in women identified as a result of having delivered an affected baby is more rapid and results in greater morbidity and mortality than in nonpregnant individuals.

In comparison, Goedert and coworkers[69] reported three-year incidence rates of AIDS in HIV positive nonpregnant individuals that varied by geographic location and risk factors related to HIV infection. Over a three-year period, AIDS developed in 17.2 percent of homosexual men who were HIV positive in Washington, DC; in 8.0 percent of homosexuals in Denmark; in 12.5 percent of intravenous drug users in Queens, NY; and in 12.8 percent of hemophiliacs in Hershey, PA.

It has been suggested that the rate of development of AIDS in HIV positive individuals depends on the length of time since exposure. Epidemiologic data indicate that HIV has been present in New York City longer than other areas. Indeed, Goedert found 34.2 percent of HIV infected homosexual men in Manhattan developed AIDS within three years.

This may explain the relatively high incidence of AIDS in association with pregnancy reported by Scott and Minkoff. Women identified as HIV positive only after their babies are diagnosed with AIDS or ARC may have been HIV infected for a greater length of time. It may be that certain characteristics of their HIV infection (related to the transmission of HIV to their infants and the infants' poor outcome) also are involved in their own poor outcome.

Other considerations involving HIV infection during pregnancy include possible complications during the antepartum, intrapartum, and postpartum course. In a study by Minkoff *et al.*,[70] 34 pregnancies that resulted in the delivery of infants with AIDS or ARC were investigated. None of the women had a clinical diagnosis of AIDS or ARC during pregnancy. Only 4 of 32 gave a history of symptoms that possibly could have been related to immunocompromise (recurrent fevers, recurring genital herpes, recurrent vulvar furuncles, and diarrhea were reported by one patient each). Pregnancy complications included oligohydramnios, abruptio placentae, urinary tract infection, and elevated blood pressure, each occurring in single patients. Six women had had no prenatal care. Average weight gain during pregnancy was in the normal range. About one-third of the pregnancies resulted in low birth weight infants (11 of 34) and there was premature rupture of membranes in more than half the pregnancies (18 of 34). However, it was noted that the population studied has a relatively high incidence of low birth weight infants in general, which might explain the rate found in this study. Preliminary data from the The University of Maryland Medical Systems Hospital has failed to demonstrate an adverse effect of HIV seropositivity on pregnancy outcomes. Ten of 33 infants (30 percent) Minkoff described were delivered by cesarean section. This confirms that operative delivery is not a guarantee of neonatal well-being.

### HIV Screening

It is clear that women at high risk may show no clinical evidence of HIV infection; therefore, it would not be possible to screen women for HIV based on their clinical course. Serologic screening for HIV antibody is currently the only way to identify individuals who are capable of transmitting the virus. There is still no cure for AIDS. Development of a vaccine for HIV is proving more difficult than expected. Because HIV makes many errors in its replication, it may be difficult to identify a constant antigen for use in vaccine development. In addition, there may be many different serotypes of HIV.[71] Therefore, at this time, the only way to decrease the numbers of cases of AIDS is to reduce the transmission of HIV.

The goals of a campaign aimed at decreasing the number of AIDS cases in women are to reduce

- transmission of HIV to women
- perinatal transmission of HIV to children
- heterosexual transmission of HIV into the population as a whole

Since HIV infection often exists asymptomatically for months and even years, identification of those individuals at risk for infection and further transmission of the virus requires a comprehensive screening program. High-risk groups have been identified as previously outlined; however, in women, 11 percent of cases of AIDS have occurred with an undetermined source of infection.[5] It has been suggested that some women may be unaware of their exposure to a person in a high-risk group. This is most likely to occur during heterosexual intercourse with men who are intravenous drug users and/or bisexual.[5] It may be that all women with several heterosexual contacts, especially those in areas of high prevalence of HIV, should be considered at high risk for HIV.

The CDC has made specific recommendations in order to identify those who may be at risk for HIV infection.[2] The guidelines suggest counseling and testing of these groups:

1. Persons who may have sexually transmitted diseases
2. Intravenous drug users
3. Persons who consider themselves at risk
4. Women of childbearing age who:
   a. have used intravenous drugs
   b. have engaged in prostitution

c. have had sexual partners who are infected or are at risk for infection
d. are living in communities or emigrated within the past ten years from countries where there is a high prevalence of HIV
e. received a blood transfusion between 1978 and 1985

5. Persons planning marriage
6. Persons undergoing medical evaluation or treatment
7. Persons admitted to hospitals
8. Persons in correctional systems
9. Prostitutes

In addition, partners of high-risk individuals should be notified and referred for appropriate counseling and testing.

At the University of Maryland Medical Systems Hospital Obstetrics and Gynecology Clinic all women are administered a risk assessment questionnaire prior to evaluation by their physician. Patients with identifiable risk factors are counseled and offered screening. In addition, all pregnant patients regardless of risk group are offered screening. However, risk assessment will fail to identify many seropositive women. Landesman *et al.* reported that their screening program of directed interviewing to determine risk factors and referral of women to testing centers failed to identify risk factors in 5 of 12 (42 percent) HIV infected women.[14] Krasinski *et al.* reported that their screening program, based on identification of risk factors and voluntary testing, failed to identify 24 of 28 HIV infected mothers (86 percent) and their children at risk for HIV infection.[72] Therefore, medical personnel never should rely on screening programs when making infection control decisions. All patients must be treated as potentially infectious.

Serologic tests for detecting antibody to HIV have been shown to be extremely sensitive and specific. Individuals who are positive by enzyme linked immunoabsorbent assay (ELISA) and Western blot or immunofluorescence assay are considered to be infected with the virus.[28] It is important to note that the ELISA test alone may generate false-positive results, especially when used to screen groups with a low prevalence of infection.[73] Therefore, it is essential to obtain Western blot tests in all cases of positive ELISA tests before advising the patient of test results.

False-negative results with the ELISA test are very uncommon, reported at less than 1 percent.[2] If the ELISA test is negative, a confirmatory test like the Western blot is not necessary. A negative ELISA test result indicates in virtually all instances that the individual has not been infected with HIV,[26] with one exception. That exception occurs immediately after infection, the "window" period, when viral replication and presumably infectivity may occur in the absence of a detectable serologic response.[74] This window period has been reported to last six to twelve weeks,[2] but detectable antibody may not be present for many months after HIV infection.

Individuals at high risk who are seronegative must be educated so that infection can be prevented. At present, guidelines for "protective sex" involve the use of condoms[75] in conjunction with a nonoxynol-9 containing spermicide.[76] This will significantly reduce although not entirely eliminate the risk of acquiring the virus via intercourse. To stop needle-borne transmission, patients are counseled not to share unsterile needles or syringes.

Once a woman has been identified as being infected with HIV, she must be counseled regarding the risk to herself and others. The patient's sexual partners and children should be referred for appropriate medical evaluation, testing, and counseling. The patient must be advised on how to prevent transmission of HIV to others. Heterosexual intercourse should be protected with condoms and spermicide containing nonoxynol-9. The patient should avoid situations where her blood or vaginal secretions might contact others; she is instructed not to donate blood or any body part. In light of the recent data, the patient should be counseled to avoid pregnancy. If pregnancy does occur, discussion should be undertaken with the patient regarding the risk to herself and to her infant. Pregnancy termination is offered, but the decision is left to the patient. Postpartum permanent sterilization is also offered to the patient.

As previously outlined, pregnant women with HIV infection may be more susceptible to progression of the disease. Opportunistic infections and other life-threatening conditions have been reported. Little is known about the potential hazards to the fetus of currently available therapy, but given the toxicity of these drugs when administered to adults, it seems likely that the effects on the fetus would be unfavorable. At the present time, therapeutic agents should be administered only when the potential benefits to the mother outweigh the potential risks to the fetus.

The management of the delivery of an infant from a mother infected with HIV should not differ from that of other infectious diseases with blood-borne transmission. All health care personnel should be protected appropriately with gowns, gloves, and goggles at the time of delivery, although generally only gloves are necessary for antepartum pelvic examinations. Use of the DeLee trap for infant oropharyngeal suctioning should be avoided. As previously mentioned, cesarean delivery offers no protection to the infant from infection. Scalp electrodes and fetal blood pH sampling are relatively contraindicated; an uninfected infant receiving a scalp lacera-

tion may become infected through contact with maternal vaginal secretions or blood.

Postpartum care should follow routine standards, with special attention to individual needs. Any patient with AIDS must not receive attenuated live virus vaccines; postpartum mothers with AIDS should not receive rubella vaccines.[15]

The infant need not be isolated once in the nursery, although health care personnel should be aware of potential infectivity. There is no evidence that routine contact during caregiving is involved in transmission of the virus.

Breast-feeding is contraindicated. Passively transferred maternal antibody will remain in the baby's blood for up to 14 months. As recently described,[77] the immune response of the infant to HIV infection may be helpful in earlier identification of infected infants.

Clearly the highly complex problem of HIV infection in women and their pregnancies and its ultimate resolution will depend on the development of a vaccine. Recent work in animals suggests it may be possible to reduce perinatal transmission by pharmacologic intervention in infected women both pre- and post-conception. Even if effective, this strategy will not address the effects of HIV on the women themselves, and vaccine development appears to be a long way off. In the meantime, it is the responsibility of all health professionals to familiarize themselves with both the scope of the problem and the presently available intervention strategems.

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# Incidence of Penetrating Chest and/or Abdomen Injury

*DENISE G. SIMONS-MORTON MD, MPH and IRVING I. KESSLER MD, DrPH*

**Injuries are the fourth leading cause of death in the United States, the leading cause of death for people from age 1 to 44, [1] and the leading cause of years of potential life lost before age 65.[2] In 1980 approximately 160,000 deaths were due to both intentional and unintentional injuries. [3] Despite their importance, little data exist on the incidence of specific types of injuries. This study determined the incidence of penetrating chest and/or abdomen injuries in Baltimore City during 1979-1980 by using three city data sources: police, ambulance, and medical examiner. The annual incidence was 144.1 injuries per 100,000 population. There were 6.8 times more males involved and 3.4 times more nonwhite; over 90 percent of the patients were 15 to 54 years old; and incidence was lower in winter than summer months. These injury rates and distributions may aid both those who plan trauma care services and trauma-care physicians to better understand the problem.**

Injuries are the leading cause of years of potential life lost (YPLL) before age 65 and result in over 3.5 million YPLL per year. [2] In 1980, 7.9 percent of deaths, approximately 160,000, were due to injuries. [3] It has been estimated that each year one of every three Americans is injured, and direct and indirect costs of injury total $74 to $100 billion per year. [4]

Trauma has received increasing attention in the public health literature, with a major focus on unintentional injury. [4-7] Recently intentional injury has received well-deserved attention. [8,9] Suicide and homicide rank tenth and eleventh, respectively, as causes of death in the United States and rank even higher in certain race/gender groups: suicide is seventh for white males, and homicide is fifth for nonwhite males and eighth for nonwhite females.[3] Suicide and homicide combined are the fourth leading cause of YPLL, resulting in over one million YPLL per year. [10]

Despite the impact of injuries on the population's health, injury data generally have been inadequate. Many investigators have cited the need for improved data [4,6,7,11-13] which is particularly lacking on trauma incidence. Incidence data can aid medical care planners, researchers, and clinicians to better plan for, evaluate, and understand the problem.

Our goal was to determine the incidence and distribution of penetrating injury to the chest and/or abdomen severe enough to require medical attention in Baltimore City. Penetrating injury, which preponderantly is due to gunshots and stabbings, was selected because of the importance of intentional injury in a large urban center such as Baltimore. In addition, citywide data are available for determining the incidence of this type injury.

## Methods

The following were eligibility criteria for cases: (1) at least one penetrating injury to the chest and/or abdomen during one episode, and (2) injury occurring in Baltimore City during 1979 or 1980. If more than one episode occurred to the same person, each episode was counted as a case because persons receiving an injury remain at risk for a subsequent injury. A penetrating injury was defined as one in which the skin was broken and the agent of cause entered subcutaneous tissue or a deep underlying structure or cavity.

Cases were located using three city data sources (CDSs): police reports, ambulance reports, and medical examiner logs. Cases occurring outside city limits were excluded. In Baltimore, a city law requires that all penetrating wounds occurring within city limits and seen in city medical facilities be reported to the police. [14] These three sources should contain all cases severe enough to receive medical attention.

To eliminate redundance, cases identified by each CDS were matched with cases from each other CDS based on the victim's name, address, age, race, and gender, and the date of injury-causing episode. Descriptions of the CDS reports were published previously. [15]

Based on data from the three CDSs, the following were calculated for 1979 and 1980: frequency distributions of age, race, and sex; incidence for the total population and for age, race, and sex categories; and frequency distribution and incidence by month. Denominators for incidence calculations were obtained from the 1980 Census [16] both for 1980 and for the most accurate available estimate of 1979. Incidence ratios were calculated for male to female and nonwhite to white cases.

## Findings

Data from the three city data sources show 1,133 cases

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occurring in 1979 and 1,135 in 1980. Incidence per 100,000 population were calculated to be 144.0 in 1979 and 144.3 in 1980, for an annual rate of 144.2 per 100,000 population. Frequency distributions and incidence for age, gender, and race categories are shown in Table 1. Approximately 67 percent of injuries occurred to persons aged 15 to 34 and over 90 percent to persons aged 15 to 54. Over 85 percent of cases were male, and over 80 percent were nonwhite. The male to female ratio was 6.8; the nonwhite to white rate ratio was 3.4.

Monthly frequency distributions and incidence are shown in Table 2. A seasonal distribution is seen, with incidence lower in the winter and higher in the summer. For each year, the highest monthly incidence is approximately two times the lowest.

## Discussion

This study focused on a particular type of traumatic injury (penetrating injury to the chest and/or abdomen) that is generally due to shooting or stabbing. In this country, firearms are the most common method of suicide[8] and of homicide,[9] and knives or other cutting instruments rank second as homicide weapons.[9] It was beyond the scope of this study, however, to determine the circumstances of the injury, whether intentional, unintentional, self-inflicted, or other-inflicted, or to determine the injuring instrument.

Although the best available sources of citywide trauma data were used, it is clear there are problems with their accuracy. In a previous study, we evaluated the CDSs for their reporting accuracy by comparing them to hospital records in six study hospitals as an independent fourth source.[15] Of the cases identified by one or more CDS as being transported to a study hospital, 34.7 percent were not present in the hospital records. Of independently identified hospital cases, 86.2 percent were present in one or more CDS. If those percentages are applied to the calculated incidence rates in the present study, a range of values is obtained. The lower value of the range estimates the total number of hospitalized cases by excluding as false cases those present in CDS records but not confirmed by hospital records and by adding an estimate of additional hospital cases not present in the CDSs. The upper value includes all CDS cases as true cases whether or not confirmed by hospital records plus an estimate of additional hospital cases not in the CDSs (see Appendix for equations). The discrepancy between upper and lower values is due to the unavailability of data to confirm a large number of cases reported in the CDSs. The upper value is 46 percent higher than the lower. This wide range illustrates the considerable impact that lack

**Table 1. Incidence of Penetrating Injury to the Chest and/or Abdomen Treated in Medical Institutions, Baltimore City, 1979 and 1980**

| | 1979 | | | 1980 | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Cases | | | Cases | | | Cases | | Annual |
| Age | No. | (%) | Incidence Rate* | No. | (%) | Incidence Rate* | No. | (%) | Incidence Rate* |
| <15 | 26 | (2.3) | 15.6 | 33 | (2.9) | 19.8 | 59 | (2.6) | 17.7 |
| 15-34 | 759 | (67.0) | 270.8 | 767 | (67.6) | 273.7 | 1526 | (67.3) | 272.3 |
| 35-54 | 267 | (23.6) | 172.1 | 271 | (23.9) | 174.4 | 538 | (23.7) | 173.3 |
| 55 + | 24 | (2.1) | 13.0 | 14 | (1.2) | 7.6 | 38 | (1.7) | 10.3 |
| Race | | | | | | | | | |
| Nonwhite | 921 | (81.3) | 210.5 | 916 | (80.7) | 209.4 | 1837 | (81.0) | 210.0 |
| White ** | 212 | (18.7) | 60.8 | 219 | (19.3) | 62.7 | 431 | (19.0) | 61.8 |
| Gender | | | | | | | | | |
| Male | 977 | (86.2) | 265.9 | 966 | (85.1) | 262.9 | 1943 | (85.7) | 264.4 |
| Female | 156 | (13.8) | 37.2 | 169 | (14.9) | 40.3 | 325 | (14.3) | 38.8 |
| Total | 1133 | (100.0) | 144.0 | 1135 | (100.0) | 144.3 | 2268 | (100.0) | 144.2 |

* Per 100,000 population. Population denominators from the US Bureau of the Census. *Volume 1 Characteristics of the Population, Chapter B General Population Characteristics, Part 22 Maryland.* PC80-1B22. US Government Printing Office, August 1982.
**Persons of Hispanic origin included in white population.

**Table 2. Monthly Incidence of Penetrating Injury to the Chest and/or Abdomen Seen in Medical Institutions, Baltimore, 1979 and 1980**

| | 1979 | | | 1980 | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Cases | | Incidence | Cases | | Incidence | Cases | | Annual Incidence |
| | No. | (%) | Rate* | No. | (%) | Rate* | No. | (%) | Rate* |
| January | 66 | (5.8) | 8.4 | 68 | (6.0) | 8.6 | 134 | (5.9) | 8.5 |
| February | 44 | (3.9) | 5.6 | 77 | (6.8) | 9.8 | 121 | (5.3) | 7.7 |
| March | 93 | (8.2) | 11.8 | 70 | (6.2) | 8.9 | '163 | (7.2) | 10.4 |
| April | 90 | (7.9) | 11.4 | 71 | (6.3) | 9.0 | 161 | (7.1) | 10.2 |
| May | 99 | (8.7) | 12.6 | 108 | (9.5) | 13.7 | 207 | (9.1) | 13.2 |
| June | 115 | (10.2) | 14.6 | 105 | (9.3) | 13.3 | 220 | (9.7) | 14.0 |
| July | 108 | (9.5) | 13.7 | 112 | (9.9) | 14.2 | 220 | (9.7) | 14.0 |
| August | 112 | (9.9) | 14.2 | 138 | (12.2) | 17.5 | 250 | (11.0) | 15.9 |
| September | 108 | (9.5) | 13.7 | 124 | (10.9) | 15.8 | 232 | (10.2) | 14.8 |
| October | 97 | (8.6) | 12.3 | 96 | (8.5) | 12.2 | 193 | (8.5) | 12.3 |
| November | 107 | (9.4) | 13.6 | 91 | (8.0) | 11.6 | 198 | (8.7) | 12.6 |
| December | 94 | (8.3) | 11.9 | 75 | (6.6) | 9.5 | 169 | (7.5) | 10.7 |
| Total | 1133 | (99.9)** | 144.0 | 113.5 | (100.2)** | 144.3 | 2268 | (99.9)** | 144.2 |

* Per 100,000 population. Population denominators from the US Bureau of the Census. *1980 Census of the Population, Volume 1 Characteristics of the Population, Chapter B General Population Characteristics, Part 22 Maryland.* PC80-1-B22. US Government Printing Office, 1982.

**Does not total 100.0 due to rounding.

of information can have on incidence rates that are calculated from CDS data. Despite this important problem, we feel the CDS data are the best data routinely available.

A comparison of male/female and nonwhite/white ratios obtained in this study to national and state mortality data due to intentional injuries (homicide and suicide) reveals some striking differences in the relationships (Table 3). With respect to gender, US and Maryland suicide and homicide data have male/female ratios that are about half those found in the present incidence study. With respect to race, the present findings are consistent in direction with mortality data for homicide but are reversed for suicide.

Differences in rate ratios between penetrating trauma incidence and intentional trauma mortality may be due to differences in case fatality rates, and a reversal in the ratio for suicide could be due to a preponderance of other-inflicted injuries in our study population. Inconsistency of incidence data with mortality data also could occur if the specific type of injury studied is not representative of the range of injuries leading to homicide or suicide and could occur as a result of inaccurate data sources.

A seasonal distribution was seen in this study, with higher incidence in warmer months than in colder months. US homicide data also exhibit a seasonal distribution, with greater homicide rates in the warmer months,[3] although not as pronounced as in our study. National suicide data do not show such variation.[3]

**Table 3. Intentional injury mortality rates* and ratios from U.S. and Maryland, and incidence rates and ratios of penetrating injury to the chest and/or abdomen from Baltimore city.**

| | Mortality | | | | | | | | Incidence | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Homicide and Legal Intervention | | | | Suicide | | | | Penetrating Injury | |
| | US | | Maryland | | US | | Maryland | | Baltimore | |
| | rate | (RR) | rate | (RR) | rate | (RR) | rate * | (RR) | rate | (RR) |
| Male | 17.3 | | 17.0 | | 18.6 | | 17.0 | | 264.4 | |
| | | (3.8) | | (4.7) | | (3.4) | | (3.5) | | (6.8) |
| Female | 4.5 | | 3.6 | | 5.5 | | 4.9 | | 38.8 | |
| Nonwhite | 33.8 | | 26.0 | | 6.4 | | 6.7 | | 210.0 | |
| | | (4.8) | | (5.4) | | (0.5) | | (0.6) | | (3.4) |
| White | 7.0 | | 4.8 | | 12.6 | | 11.0 | | 61.8 | |

*Rates per 100,000 population

Numerators from National Center for Health Statistics. *Vital statistics of the U.S., 1980: Volume II -Mortality, Part B.* USDHHS (PHS), 1985. Denominators from US Bureau of the Census. *County and City Data Book, 1983.* Washington, DC : US Government Printing Office, 1983.

These findings and comparisons suggest that mortality data from vital statistics do not adequately reflect trauma incidence, and that available city data sources may provide inaccurate incidence data. More accurate population-based incidence data are needed to adequately characterize trauma and to target services and prevention efforts. However, absent such data, findings from the current study provide much-needed incidence data from available sources, and may help medical care planners and trauma-care physicians.


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### Appendix: Equations for Calculating Incidence Rate Ranges

**Lower Limit**

(I x 0.653)/0.862 = estimate of total number of hospitalized cases

**Where,**

I= calculated incidence rate

0.653 = (1-0.347) = proportion of CDS cases confirmed as true cases (by hospital records)

0.862 = proportion of hospitalized cases located in CDS records

**Upper Limit**

I(1.105) = all CDS cases, whether or not confirmed by hospital records, plus an estimate of additional hospital cases not found in the CDSs

**Derived from:**

[n + n(0.653)/0.862 - n(0.653)]/p

**Where,**

n = total number of cases

n(0.653)/0.862 = total number of hospitalized cases (from lower limit)

n(0.653) = CDS cases confirmed by hospital records

I = n/p = incidence rate

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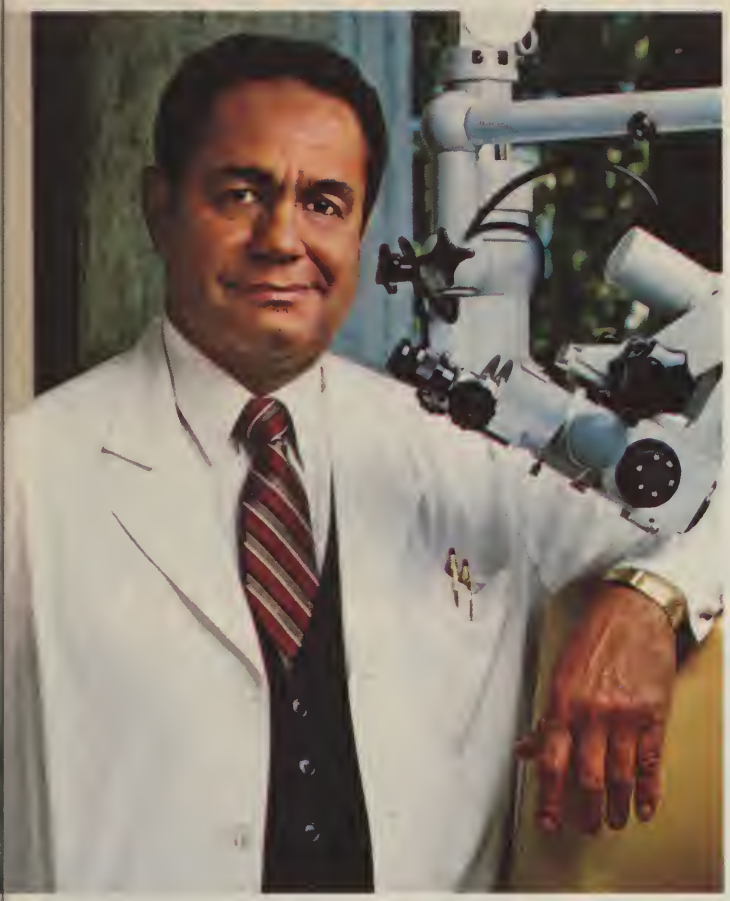
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Dr. Tipton and residents examining post-operative patient in recovery room.

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*Carcinogenesis, Mutagenesis, Impairment of Fertility*—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

*Pregnancy—Teratogenic Effects—Pregnancy Category C*—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bitida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

*Nursing Mothers*—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

*Pediatric Use*—Safety and effectiveness in children have not been established.

*Use in Elderly Patients*—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

*Hepatic*—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

*Cardiovascular*—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

*Endocrine*—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

*Hematologic*—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another $H_2$-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

*Integumental*—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

*Other*—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

**Overdosage:** There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous $LD_{50}$ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

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**In the Matter of**
**Samuel Dubin MD**
**Before the**
**Commission on Medical Discipline**

**Findings of Fact,**
**Conclusion of Law and Order**

Based on certain information coming to the attention of the Maryland Commission on Medical Discipline (the "Commission"), the Commission determined to charge Samuel Dubin MD (the "Respondent") with the violation of Sections 14-504(3) and (4) of the Maryland Medical Practice Act, Health-Occupations Article, Annotated Code of Maryland (the "Act"). [1] A charge letter to this effect was issued on July 21, 1987. These disciplinary provisions provide that the Commission may reprimand any licensee, place any licensee on probation, or suspend or revoke a medical license if the licensee:

> Is guilty of immoral conduct in the practice of medicine. (S14-504(3) of the Act).
> Is professionally . . . incompetent. (S14-504(4) of the Act).

The July 21, 1987 charge letter was predicted upon Respondent's relationship and actions involving two former patients. This charge letter was mailed to Respondent by certified mail, return receipt requested. A hearing was scheduled for Tuesday, September 29, 1987. Respondent did not receive this notice and, on September 18, 1987, Respondent was personally served with another copy of the charge letter. [2]

Respondent's counsel requested a postponement of the December 15, 1987 hearing date. This request was grated, and a new hearing date of February 9, 1987 was established. In addition, an amended charge letter dated December 15, 1987 was issued to Respondent and counsel. This letter charging document reflected allegations concerning a third patient.

A prehearing conference was conducted on January 15, 1988. The Commission conducted an evidentiary hearing in this matter on February 2, 25, and 27, 1988. Closing arguments were presented by counsel on May 3, 1988.

**Findings of Fact**

The Commission finds that:

1. Respondent is a physician licensed to practice medicine in the State of Maryland. At all times relevant to these charges, Respondent was subject to the jurisdiction of the Commission.

2. Respondent's medical specialty is in the field of psychiatry. He has treated patients on both an outpatient and inpatient basis.

3. Patient One is a female in her mid-thirties. [3] She made the following allegations regarding her course of treatment with Respondent:

> (a) Beginning in the latter months of 1974 and continuing for several months into 1975, Patient One entered into a therapeutic relationship with Respondent on an outpatient basis in an effort to deal with a number of personal issues.
> (b) On or about December 3, 1984, Patient One filed a written complaint with the Montgomery County Medical Society alleging that Respondent engaged inappropriate sexual behavior with her during the course of their therapy sessions.
> (c) Specifically, Patient One alleged that Respondent disrobed during a number of therapy sessions, repeatedly requested and occasionally convinced the patient to partially disrobe and, at least one time manipulated the patient's genital area while both patient and psychiatrist were undressed.

4. Patient Two is a 34-year-old female. She made the following allegations regarding her course of treatment with Respondent:

> (a) On or about June 23, 1982, Patient Two was admitted to Montgomery County Hospital to receive inpatient services for psychiatric difficulties.
> (b) During the course of this admission, Respondent provided psychiatric treatment and evaluation services to Patient Two.
> (c) Respondent evaluated Patient Two during the course of this admission and made recommendations concerning her release and need for ongoing outpatient treatment.
> (d) Respondent made arrangements for Patient Two and her fiance to initiate a course of outpatient treatment following her release from Montgomery County Hospital.
> (e) Shortly after her release from Montgomery General Hospital, Patient Two and her fiance met with Respondent in a private medical office. At the conclusion of this session, Respondent requested and made arrangements for Patient Two to attend a second therapy session without her companion.
> (f) On or about June 28, 1982, Patient Two met along with Respondent for an individual psychotherapy session. During the course of this treatment session, Patient Two alleged that Respondent engaged in inappropriate sexual activity including the touching of the patient's legs, thighs, and breasts. Respondent attempted to explain and justify this incident on therapeutic grounds.
> (g) On the night following this incident, Patient Two testified that she contacted another therapist to discuss her concerns about Respondent's actions. On or about July 1, 1982, Patient Two submitted a police report concerning Respondent's treatment of her during the second therapy session.

1 Prior to the recodification of the Health-Occupations Article, parallel physician disciplinary provisions were set forth in 1969 Laws of Maryland, Ch. 469, S145(h) (8) and (18)

2 Although COMAR 10.31.01.01B requires that a notice of a hearing be received at least ten (10) days before the scheduled hearing date, the Commission rescheduled the disciplinary hearing for Tuesday, December 15, 1987.

3 During the course of the evidentiary hearings, allegations concerning three patients were presented. Patients One and Two themselves submitted complaints to investigatory authorities. Complaints concerning Patient Three were submitted by her daughter. To preserve the confidentiality of these complainants, the patients are referred to by number throughout this decision

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

(h) In March 1983, investigators from the Department of Health and Mental Hygiene interviewed Patient Two with respect to the allegations set forth in the police report.

5. Respondent has declined to comment on or provide a comprehensive response to the allegations submitted by Patients One and Two. During the course of the evidentiary hearings conducted before the Commission, Respondent moved to dismiss any charges based on the allegations set forth by Patients One and Two. This motion was denied. Subsequently, Respondent provided little, if any direct evidence of information concerning his therapeutic relationship with Patients One and Two or the allegations presented by these individuals to the Commission.

6. During the course of the evidentiary hearing, both Patients One and Two testified at length concerning the origins, course and termination of their therapeutic relationship with the Respondent. Both patients responded fully to questioning by Commission members and were extensively cross-examined by Respondent's counsel.

7. In addition to the testimony of Patients One and Two, additional testimony was presented by Jessie Hellman MD, Chairman of the Maryland Psychiatric Association Peer Review Committee. On or about September 30, 1985, this Peer Review Committee separately interviewed and evaluated Patients One and Two. Respondent was afforded an Opportunity to present information to this committee but declined to do so. On or about March 5, 1986, the Maryland Psychiatric Society submitted a peer review report to the Commission regarding the results of these interviews. Dr. Hellman also presented extensive expert testimony concerning the inappropriateness of sexual relationships between patients and therapists, ethical and psychiatric standards underlying therapeutic relationships and specific psychiatric concepts such as transference and countertransference.

8. Respondent billed Patients One and Two for some if not all of the treatment sessions described herein. After being unable to obtain full payment for these services, Respondent sent collection notices to Patient One seeking full payment for such services.

9. Based on the foregoing facts and its evaluation of the testimony presented by Patients One and Two, the Commission finds that the testimony presented by these individuals is credible, consistent, and trustworthy.

10. There is no valid medical or psychiatric treatment that involves sexual contact between patient and treating psychiatrist during the course of the therapeutic relationship. In the context of the therapeutic relationship established between Respondent and Patients One and Two, such sexual activities must be viewed as countertherapeutic and are inconsistent with commonly accepted psychiatric/medical standards and practices, and likewise violative of the guidelines issued by the American Psychiatric Association. As set forth below, the Commission reaches the same calculation with respect to Patient Three.

11. Separate and apart from his relationship with Patients One and Two, Respondent entered into a long-term therapeutic, personal, and sexual relationship with Patient Three. Respondent's behavior and clinical judgment during the course of this relationship constituted an extreme breach of applicable medical and psychiatric standards.

12. Patient Three was admitted to Montgomery General Hospital on or about September 23, 1977. She remained in the hospital until October 8, 1977. During the course of this admission, Respondent interviewed the patient on several occasions and provided other treating clinicians with a psychiatric consultation with respect to Patient Three's clinical condition. From the time of this admission until September 29, 1981, Respondent maintained a professional and therapeutic relationship with Patient Three. Billing records indicated that Respondent submitted reimbursement requests to Blue Cross/Blue Shield for a number of these treatment sessions.

13. Respondent stipulated to a number of factual findings regarding his relationship with the treatment of Patient Three including:

> (a) "Respondent prescribed Demerol and Dilaudid to (Patient Three) . . . from April 16, 1980 until July 1, 1980."
> (b) "Respondent prescribed legend drugs, not Scheduled II drugs to (Patient Three) until the summer of 1987."
> (c) "During the summer of 1978, Respondent became personally involved with (Patient Three) and began a sexual relationship with her which lasted until her death on December 12, 1987."
> (d) At the time Respondent became involved personally, intimately, and sexually with (Patient Three), she was his patient and was married to someone else."
> (e) "In the Spring of 1979, Respondent and (Patient Three) moved into separate apartments in the same complex."
> (f) "In January of 1987, Respondent and (Patient Three) began co-habitating."
> (g) "Until her death, (Patient Three) worked for Respondent from 1978 as a nurse and bookkeeper."
> (h) "(Patient Three) died on December 12, 1987 and the cause of death was acute drug intoxication (Propoxyphene and Acetaminophen), fatty metamorphosis of the liver, and cachexia. . . ."

See Stipulation of Fact.

14. Since at least 1977, Patient Three evidenced symptoms of severe drug addiction. Over the course of the next ten years, Respondent was aware of this addiction based on his personal relationship with Patient Three and by virtue of his ongoing involvement with Patient Three's repeated inpatient admissions to various Maryland hospitals. On several occasions, Respondent attended to this patient during the course of her hospitalizations and had access to medical records

delineating the nature of this patient's medical and psychiatric condition. Respondent was specifically aware of his patient's drug preferences including her dependency on Demerol. Despite this knowledge, Respondent prescribed significant dosages of Demerol and Dilaudid to Patient Three from April 16, 1980 until July 1, 1980 on an outpatient basis.

15. After considering the testimony of Drs. Hellman, Chambers, and Respondent, the Commission finds that Respondent's prescription of the foregoing drugs on an outpatient basis under these circumstances does not comport with applicable medical and psychiatric standards applicable to Maryland psychiatrists providing treatment services in these circumstances.

16. The Commission finds that Respondent maintained a personal and sexual relationship with Patient Three on a long-term basis and that this relationship was inconsistent with the patient's therapeutic needs. The Commission further finds that Respondent failed to take appropriate action to terminate his multifaceted relationship with Patient Three in accordance with accepted medical and psychiatric standards. His ongoing failure to take definitive action consistent with his ethical and professional obligations evidences a failure to recognize and respond to fundamental components of the patient-psychiatrist relationship.

17. The Commission has independently assessed and evaluated the nature of Respondent's therapeutic relationships with Patient One, Two, and Three. His behavior with respect to each of these patients reflects numerous professional standards governing the appropriate practice of psychiatry governing similarly situated Maryland practitioners. Respondent's treatment relationship with Patient Three reflects significant breaches of numerous professional standards, treatment protocols, and clinical safeguards that are not at issue with respect to the remaining two patients.

18. The Commission specifically determines that Respondent's treatment of and relationship with Patient Three would and does warrant the disciplinary action set forth herein without reference to or consideration of his treatment of any other patients. The Commission explicitly finds and determines that this disciplinary action is warranted on the basis of the evidence submitted with respect to Patient Three along.

### Conclusions of Law

Based on the foregoing Finding of Facts, the Commission on Medical Discipline, by the unanimous vote of a guorum of its members, concludes as a matter of law that Respondent violated S14-504(3) and (4) of the Maryland Medical Practice Act, Health-Occupations Article, Annotated Code of Maryland, and finds Respondent **GUILTY** of those charges.

### Order

Based upon the foregoing Finding of Facts and Conclusions of Law, it is hereby this 14th day of June 1988, by the unanimous vote of a guorum of the members of the Commission on Medical Discipline,

ORDERED that the license of Respondent, Samuel Dubin MD, an individual licensed to practice medicine in the State of Maryland, shall be and hereby is REVOKED; and be it further

ORDERED that Respondent, upon presentation of this Order, shall immediately deliver to the Investigator of the Investigative Unit of the Department of Health and Mental Hygiene of Maryland (1) his diploma-sized certificate from the Board of Medical Examiners; (2) his current Department of Health and Mental Hygiene License Renewal Certificate; (3) his current wallet-sized license renewal card; (4) any and all permits to prescribe Schedule I or schedule II-V drugs; (5) any documentation in any form whatsoever that indicates that Respondent is licensed to practice medicine in Maryland; and (6) any prescription pads in his possession or custody; and be it further

ORDERED that Respondent shall take immediate steps to notify and assist in the transfer of any patients with whom he maintains a professional relationship to an appropriate clinician or professional who will be able to adequately provide necessary services on an ongoing basis; and be it further

ORDERED that said transfer of patients and the surrender of all licensing and prescribing documents as described herein shall be effectuated on or before June 39, 1988.

*HILARY T. O'HERLIHY MD,* Chairman
Commission on Medical Discipline

• • •

## In the Matter of Babu Rao MD Before the Commission on Medical Discipline

### Findings of Fact, Conclusions of Law, Order

Based on information coming to its attention, the Commission on Medical Discipline of Maryland (the "Commission") determined to charge Babu Rao MD (the "Respondent") with violating S14-504 of Title 14 of the Health Occupations Article, Annotated Code of Maryland, the Maryland Medical Practice Act (the "Act"). The specific charge alleges violation S14-504(4) of the Act which provides:

> Subject to the hearing provisions of this subtitle, the Commission . . . may . . . reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
> (4) Is professionally . . . incompetent.

Respondent was properly notified of the foregoing charges and the allegations on which they were based through a charge letter issued on or about April 27, 1987. A prehearing conference was scheduled for June 9, 1987. An evidentiary hearing on the charge was originally scheduled for September 1, 1987 but was postponed until January 5, 1988. Respondent and his counsel appeared before the Commission on that date. In disposing of this case, the Commission considered only that evidence presented during the course of the hearing conducted on January 5, 1988. Specifically, the Commission considered the exhibits and stipulation presented by the parties and the testimony presented by Respondent in his own behalf. After considering all of this evidence, the Commission makes the following Findings of Fact, Conclusions of Law, and Order.

**Findings of Fact**

Based on the evidence adduced at the hearing, the Commission finds that:

1. At all times pertinent to the charges, Respondent was a physician licensed to practice medicine in Maryland and subject to the jurisdiction of the Commission.

2. Respondent conducts an office practice devoted to family medicine.

3. Peer Reviews of Respondent's office practice by the Peer Review Committee of the Baltimore County Medical Association in 1983, 1984, and 1986 disclosed a number of deficiencies.

4. In a number of cases, Respondent's handling of blood tests and their results deviated from the standard of care applicable to a physician practicing in Maryland under similar circumstances (hereinafter "applicable standard of care") and demonstrates a lack of knowledge about therapeutic blood levels.

a. Potassium levels were not done often enough for Patient A., who was taking a diuretic.
b. Periodic Quinadine and Dilantine levels were not obtained for Patient B despite long-term use and even after a new seizure.
c. When results of a blood level test eventually obtained for Patient B showed inadequate levels of Quinadine and Dilantin in the Blood, no steps were taken in response to that information.
d. In the case of Patient C, a blood test taken in 1986 showed elevated blood sugar, but nothing was done about it.
e. In the case of Patient D, Respondent took unnecessarily frequent glucosolated hemoglobin levels.

5. In a number of records reviewed, Respondent demonstrated inadequate knowledge and skills as to electrocardiograms.

a. In the cases of Patient B, Patient F, and Patient A, electrocardiograms are mounted but are not interpreted on the face of the EKG. Interpretations are included on the charts of Patient A and F, but those interpretations are cursory and incomplete.
b. In the case of Patient E, Respondent made an unsubstantiated diagnosis of "acute anginal pains" in the Discharge Summary when this patient was discharged from Baltimore County General Hospital.
c. In the case of Patient D, Respondent wrote that the EKG was within normal limits. In fact, there was T-wave changes which a physician exercising the applicable standard of care would have pursued.
d. In the case of Patient F, Respondent did not take any EKGs in April 1985 even though the patient was complaining of chest pains.
e. In the case of Patient C, the EKG showed ST elevations in V1 and V4, but these were noted only in V1 and V2.

6. In the cases of Patients G, H, I, J, K, L, M and N, Respondent prescribed medications, including controlled dangerous substances, on a continuing long-term basis without adequate documentation in the record. In those cased, Respondent deviated from the applicable standard of care in that he failed to investigate possible causes of the pain syndrome for which medicines were requested or to consider the possibility of drug abuse or the possibility that his prescriptions were causing iatrogenic drug addiction.

7. In the following cases, Respondent's recordkeeping deviated from the applicable professional standards:

a. Respondent noted symptoms of chest pains in the records of Patients D and F but did not include full enough descriptions of the pain in the record.
b. In the case of Patient C, there was insufficient documentation of the physical examination.
c. In the case of Patient B, the patient was at one time placed on Meclonen for reasons not documented in the chart.
d. It was noted in the record that Patient D was sent for a Stress test, but no results were available in the record.

8. Respondent has not conducted a hospital practice since April 1981. Prior to that time, however, serious deficiencies existed in his hospital practice at Baltimore County General Hospital.

a. The admission histories of Patients O and F omitted information that under the applicable standard of care should have been included.
(1) In the case of Patient O, a patient admitted after a fall in which he fractured a navicular bone, Respondent's history failed to mention prior history of phlebitis, pulmonary embolism, hip surgery, or medications including Tedral, Demerol, as well as allergies to Penicillin and Antibuse.
(2) In the case of Patient P, who was transferred from a nursing home because of cough and fever, Respondent's history failed to state that the patient had an old left CVA with aphasia, was fed by nasogastric tube, had impaired hearing, sight and mental status as well as severe contractures and a statis decubitus. No mention was made of medications the patient was taking, which include l-dopa.
b. In the case of Patient P, Respondent performed a physical examination that did not conform to the applicable standard of care at the time of admission. Patients O, Q, and R, whose chief complaint pointed to a possible neurological problem, did not have examinations on admission.
c. As shown by the records of Patients T, R, and Q, Respondent ordered laboratory studies on admission

that were not indicated.
In the case of Patient T, a seriously ill man who was admitted with pneumonia, dehydration, diabetes, rheumatoid arthritis, and ASC, among the lab studies ordered by Respondent were thyroid studies, B12 folic levels, serum iron, and ANA titer.
Patient Q, who was admitted with pain in the left arm, had thyroid studies, serum magnesium, and protein-electrophoresis tests.
Patient R, who was admitted with asthenia and possible rectal CA, and had a normal hematocrit, and a MCV of 102 still had serum iron, foliate levels, and B12 levels done. These were in addition to magnesium, lipoprotein electrophoresis, and t4.
d. In the case of Patient Q, normal results of laboratory tests were listed in the Discharge Summary, but abnormal results (positive findings in an HLA B27 and ANA) were not.
e. In the cases of Patient P, Q, and S, orders for medications ere inappropriate, based on other information in the chart.
In the case of Patient P, six different antibiotics were started and discontinued at various times with no apparent plan of management.
In the case of Patient Q, excessive pain medication was prescribed without any documentation as to the reason.
Patient S was given Meclonen and Zomax, which can cause internal bleeding, even though she was anemic.
f. In the cases of Patient O and P, discharge summaries were inadequate with no mention of discharge medications or other aspects of future management noted. The discharge record of Patient T, omitted information about two episodes of cardiac arrest that should have been included.
g. In the case of Patient E, the Discharge Summary included inaccurate information about family history and referred to a nonexistent consultation report.
h. Respondent failed to take the proper steps to arrive at a proper diagnosis. In the case of Patient R, Respondent failed to perform a proctoscopy recommended after a barium enema. In the case of Patient S, Respondent failed to perform a GI evaluation or other tests that would have disclosed the cause of severe anemia.
i. Respondent failed to provide treatment for problems noted by him to exist. In the case of Patient S, no intravenous or aerosol therapy was provided for the condition of acute exacerbation of lung disease.
j. In the cases of Patients Q and S, acutely ill hospitalized patients, Respondent failed to visit or document visits on a frequent enough basis.
k. Based on the information in the chart, which reflects treatment planned and provided, Patient Q, who was admitted because of pain in the left arm, could have been treated on an outpatient basis and was an inappropriate admission.

9. All of the acts and omissions listed were deviations from the standard of care of a physician practicing in Maryland under similar circumstances.

10. A report to the Medical Executive Committee and Board of Trustees of Baltimore County General Hospital regarding Dr. Babu Rao by Lawrence F. Solomon MD, Chief of Staff, dated March 25, 1981, and referred to in the letter of April 6, 1983 from Charles F. Hoesch MD, Chairman, Peer Review Committee, to Karl Mech MD, described problems found in the records of 38 patients reviewed.

11. During the course of the hearing on January 5, 1988, Respondent testified that he received his initial medical training in India in the field of surgery. Respondent stated that he had not received extensive medical training in the field of family practice since coming to the United States. Although Respondent indicated that he had sought such training on various occasions, he has thus far been unsuccessful in gaining admission to a comprehensive training program. Respondent did recently complete an eight-week physician retraining course offered by the Philadelphia Medical College.

12. Respondent testified about the scope of his current office-based practice. Despite the problems noted with respect to his reading of EKGs, Respondent continues to administer and interpret EKGs during the course of his present practice. Respondent has not had privileges at a general hospital for a number of years.

13. During the course of the hearing, the Commission questioned Respondent with respect to a number of issued relating to the scope of his family practice and the stipulations presented to the Commission. In particular, Respondent answered questions pertaining to surgical techniques, psychiatric issues, and interpretations of EKGs.

## Conclusions of Law

Based on the foregoing Findings of Fact, the Commission, on the affirmative vote of a majority of its full authorized membership, concludes as a matter of law that Respondent is GUILTY of violating S14-504(4) of the Act.

## Order

Based on the foregoing Findings of Fact and Conclusion of Law, it is this 14th day of June 1988, on the affirmative vote of a majority of its full authorized membership

ORDERED that the license of Respondent, Babu Rao MD, shall be, and hereby is REVOKED; and, it is further

ORDERED that Respondent may move for the reinstatement of his medical license by submitting evidence acceptable to the Commission or its successor, the Maryland Board of Physician Quality Assurance, indicating that he is able to practice medicine in a competent fashion; and, it is further

ORDERED that any such motion for reinstatement must include proof that Respondent has successfully completed an intensive, long-term physician retraining program such as that offered by the University of Maryland under the auspices of Edward J. Kowalewski MD, or, in the alternative, has successfully completed a one year residency program in the field of family practice.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

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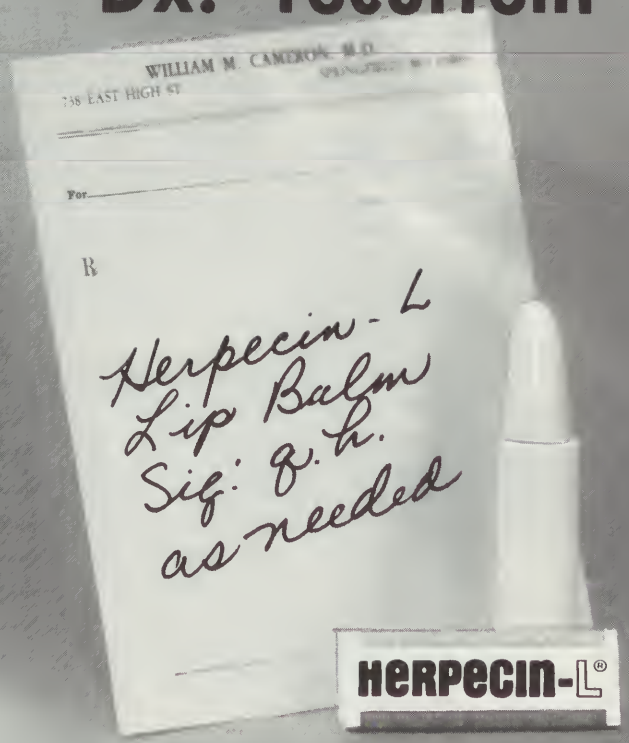
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On May 26 the Maryland State Department of Health and Mental Hygiene, The University of Maryland School of Nursing, and the Maryland Hospital Association Center for Nursing sponsored an Institute Workshop, "Taking Action to Resolve the Nursing Shortage."

Following presentations on the status of the nursing shortage from both state and national perspectives, work groups were formed to address concerns including rate setting, salary and benefits, autonomy of practice, education and curriculum, and image of the profession.

Workshop participants developed specific program recommendations that will be acted on immediately by the Governor's Task Force to Study the Crisis in Nursing. For more information on the recommendations or other aspects of the workshop, contact Marilyn Goldwater RN, Director, Office of Federal Relations, Department of Health and Mental Hygiene 301-225-6518.

*Authors of Articles*

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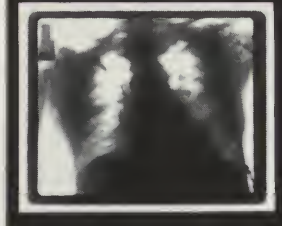
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**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

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**Indications:** Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

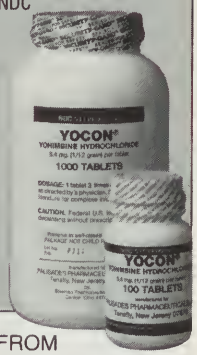
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

**References:**

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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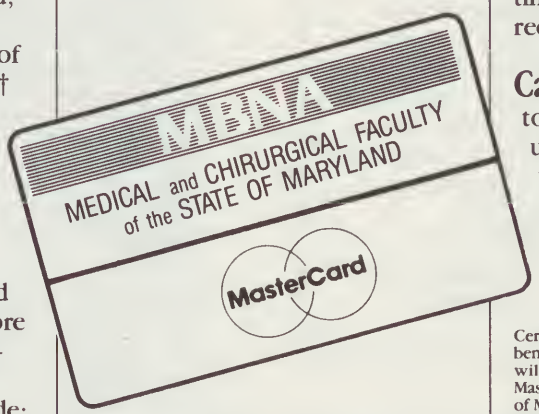
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**Friday, September 23, 1988**
**Hunt Valley Inn 8:45 a.m.–5:00 p.m.**

***Keynote speaker: Dr. Vernon E. Johnson, founder and President Emeritus of the Johnson Institute in Minneapolis, Minnesota. This program is sponsored by Med-Chi in cooperation with The Health and Education Council.***

**Early registration $100, after September 2, $110**
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**Info: Don Neilenson (Health and Education Council) 301-686-3610**
**JoAnn Cirillo (Med-Chi) 1-800-492-1056 or 301-539-0872**

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# Doctors take Note

### University of Maryland School of Medicine

**CME Courses:** For each course additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 300, Medical School Teaching Facility (MSTF), 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

**Sep 16-17 Topics in Geriatrics**, The Royce Hotel at BWI Airport, Linthicum. Fee: $124; 9 AMA and AAFP credits.

**Sep 22 Dean's Conference #1: Dermatology**, UMBC, MSTF, Baltimore. Fee: $25; 6 AMA Cat I credits.

**Sep 23 Current Concepts in Ophthalmology; Eighth Annual Clinical Conference**, Hyatt Regency Baltimore. Fee; $60; 6 AMA Cat I credits.

**Oct 14-15 Roots of Creativity: The Study of Creative Imagination in Infancy**, Omni International Hotel, Baltimore. Fee: $250; 10+ AMA Cat I credits.

**Oct 20 Dean's Conference #2: AIDS**, UMBC, MSTF Auditorium. Fee: $25; 6 AMA Cat I credits.

**Oct 27-29 Fourth Annual University of Maryland Contact Lens Symposium**, Hyatt Regency Inner Harbor, Baltimore. Fee: $160; 12.25 AMA Cat I credits.

**Nov 4-5 Second Medical Perioperative Management Postgraduate Course**, Harbor Court Hotel, Baltimore. Fee: $165; approx 10 AMA Cat I credits.

**Nov 5 A Brief Course in Brief Psychotherapy**, UMBC. Fee: $100; approx 6 AMA Cat I credits.

**Nov 16 Dean's Conference #3: Surgery**, UMBC. Fee: $25; 6 AMA Cat I credits.

**Nov 17 Diagnosis and Management of Osteoporosis**, Comfort Inn Airport (BWI). Fee: $35; 4 AMA Cat I credits.

**Dec 1-3 Eleventh National Trauma Symposium**, Baltimore Convention Center. Info: K. Unitas, MIEMSS 301-328-2399.

**Dec 14, Dean's Conference #4: Anesthesiology**, UMBC. Fee: $25; 6 AMA Cat I credits.

**Visiting Professor Program** - Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentation hosted by the University's clinical departments. Hour-for-hour AMA Cat I credits available. Brochure available.

**Advanced Trauma Life Support Provider/Instructor Programs** sponsored by University of Maryland/MIEMSS. Fee: $350-500; 16-22 CMD Cat I credits. Info: Melody Nelson 301-328-2919.

**Sep 14-16 - Instructor**
**Oct 13-14 - Provider**
**Nov 16-17 - Provider**
**Dec 15-16 - Provider**

• • •

### Miscellaneous Meetings

**Temple University School of Medicine** sponsors a series of weekend summer conferences to be held at Timberline Four Seasons Resort in Canaan Valley, WV; 9 Cat I credits. Regis & info: K. I. Saumure 215-387-3685.

**Sep 9-11 New Antibiotics for Life-Threatening Infections**
**Sep 16-18 Interventional Radiology**
**Sep 30 - Oct 2 Anesthesia Update**

**Sep 17-19 American Society for Reconstructive Microsurgery Fourth Annual Meeting**, Lord Baltimore Hotel, Baltimore, MD. Fee: active members $325, associate and corresponding members $175, nonmembers $325, residents & fellows $175. Info: ASRM, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.

**Sep 19-20 Second Annual National Symposium on AIDS Prevention: Strategies for Curbing the Epidemic Through AIDS Education**, Stouffer Harborplace Hotel, Baltimore, sponsored by The Health Education Council, 7201 Rossville Blvd., Baltimore, MD 21237 (301-686-3610).

**Sep 23 Professional Rehabilitation: Intervention and Treatment**, sponsored by Med-Chi in cooperation with the Health and Education Council, at the Marriott Hunt Valley Inn, Hunt Valley, MD Fee: early registration $100, after Sep 2, $110; 6.5 CME Cat I credits. Info: Don Neilenson 301-686-3610 or JoAnn Cirillo 1-800-492-1056 or 301-539-0872.

**Sep 24 Physicians' Cholesterol Education Program**, The Annapolis Ramada, 173 Jennifer Rd., Annapolis, MD. Info: 301-685-7074 or 225-5891.

**Sep 29-30 American College of Nuclear Physicians & Society of Nuclear Medicine Joint Symposium on Biology of Radionuclide Therapy**, Loews L'enfant Plaza Hotel, Washington, DC. Fees by Sep 6, members $195, nonmembers $215, technologists (members) $75, technologists (nonmembers) $105; thereafter: members $215, nonmembers $235, technologists (members) $95, technologists (nonmembers) $125. Info: G.S. Dikeos, ACNP, 1101 Connecticut Ave. NW - Ste 700, Washington, DC 20036 (202-857-1135).

**Oct 3-5 NIH Consensus Development Conference: Urinary Incontinence in Adults**, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852.

**Oct 22 The Second Annual John C. Dumler OB/GYN Update**, St. Agnes Hospital, Baltimore, MD. Sponsored by the Depts. of OB/GYN at St. Agnes Hospital and Univer-

sity of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Oct 26 Physicians' Cholesterol Education Program**, The Ramada Inn, 901 Dual Highway, Hagerstown, MD.. Info: 301-685-7074 or 225-5891.

**Nov 9-11 First National Cholesterol Conference**, Hyatt Regency Crystal City, Arlington, VA. Advance registration $150; conference participation limited to first 1,000 registrants. Info: The National Cholesterol Conference, 4733 Bethesda Ave. - Ste 530, Bethesda, MD 20814 (301-951-3275).

**Nov 12-13 Fetal Cardiology**, Key Bridge Marriott, Arlington, VA, sponsored by the Div of Pediatric Cardiology, University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Nov 19-20 Regional Review Course in Hand Surgery**, Washington, DC. Fee: physicians $200; residents, fellows, & allied health professionals $100; 12 AMA Cat I credits. Info: American Society for Surgery of the Hand, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.

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### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. Sponsored Continued Education Activities for 1988-1989. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Sep 8-10 Intensive Training in Spirometry Testing**, Tremont Plaza, Baltimore; sponsored by the Dept of Environmental Health Sciences. Fee: $450; limited to 20 registrants. Info: C. Walsh 301-955-2609.

**Sep 15-16 Pediatrics for the Practitioner, Update '88**. Fee: physicians $200, nurses/practitioners, & retired physicians $135; 14.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Sep 16-18 Diagnostic Ultrasound in Obstetrics and Gynecology and Abdomen**, Baltimore Marriott-Inner Harbor Hotel. Fee: physicians (3 days) $325, sonographers/RNs $250; 6 AMA Cat I credits per day, ACOG cognates available, ASRT credits. Info: 301-955-2959.

**Sep 23 Diabetic Retinopathy in 1988**. Fee: $200, $100 (those in training); 8 AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Sep 23 Occupational Stress and the Health Care Provider**, sponsored by the JHU School of Hygiene and Public Health, Dept of Environmental Health Sciences. Fee: $250. Info: J. Corn 301-955-2609.

**Sep 27 The Economic Impact of AIDS**. Fee: $75. Info: P. Macedonia 301-955-2959.

**Oct 6-8 Fourteenth Annual Topics in Gastroenterology and Liver Disease**. Fee: physicians $370; residents & fellows $185 (with letter verifying status); 20.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Oct 10-14 Thirtieth Annual Emil Novak Memorial Course**: Gynecology, Gynecological Pathology, Endocrinology, and High-risk Obstetrics. Fee: $550 ($400 for residents); 41 AMA Cat I credits. Info: C. Kearney 301-955-2959.

**Nov 4 Management of Complicated Retinal Detachments**. Fee: $175 ($90 those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Nov 5-6 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization**. Fee: $390; 14 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Dec 8-10 First Annual Wilmer Institute Current Concepts in Ophthalmology**. Fee: $250, $200 (those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

### License Registration Renewal

Physicians whose surnames begin with the initials A through L must renew their license registrations this September 1988. The Board began mailing renewal information around the middle of July.

Physicians who have not recieved the renewal application by the second week in August should contact the Board to get the information necessary for renewal before their licenses expire on September 30, 1988. It is the physicians' responsibility, by law, to communicate with the Board concerning renewal of their licenses if, for some reason, they do not receive the renewal application.

Physicians may contact the Board by writing to the address below or by calling 301-225-5900.

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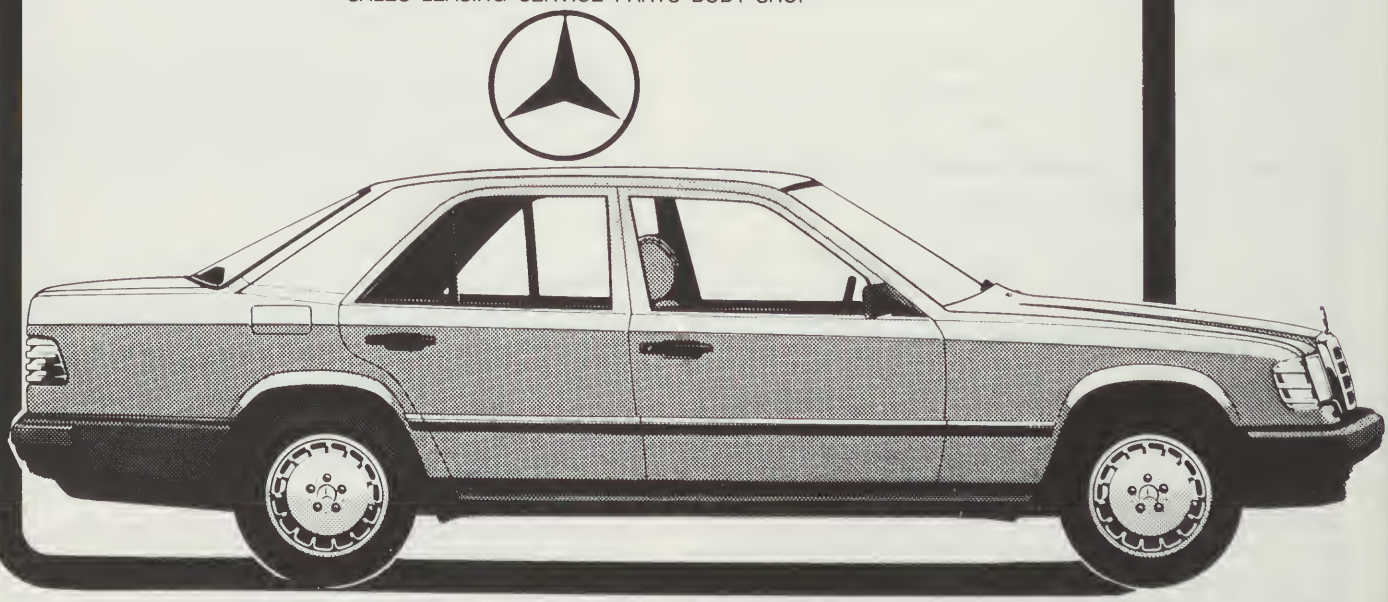
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# A DELIGHTFUL DICHOTOMY

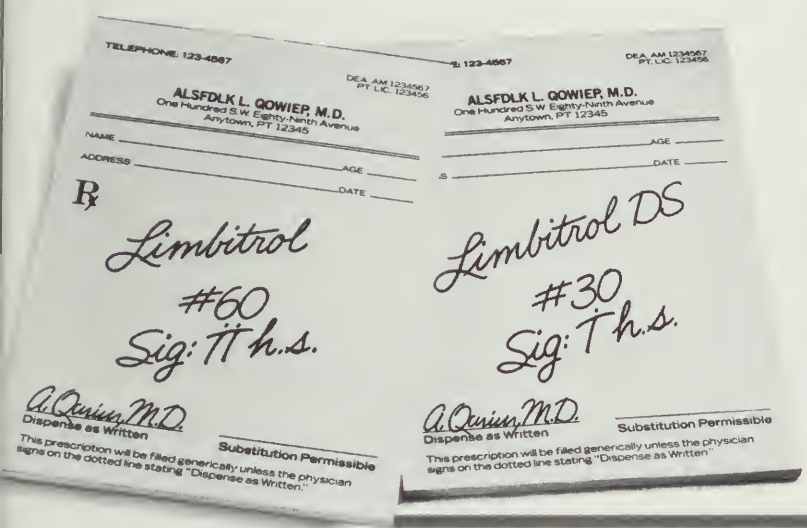
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- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]




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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓥ

# Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓥ

**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

**Limbitrol®Ⓥ**
**Tranquilizer—Antidepressant**
**Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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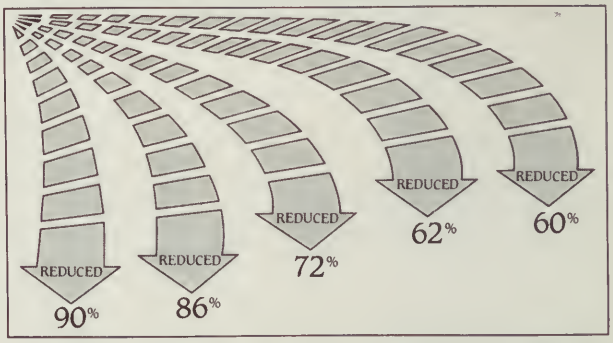
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## And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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# MMJ

October 1988

# Maryland Medical Journal

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# MEDICINE AND THE LAW

It seems that everyone is challenging the authority of the physician. The hospital becomes a battleground as doctors try to provide the best care for each patient while meeting the guidelines of hospital management, challenging those decisions of third-party payors which may threaten quality of care, and maintaining meticulous records in order to protect themselves from civil litigation which may be brought by the very patients they are working to serve.

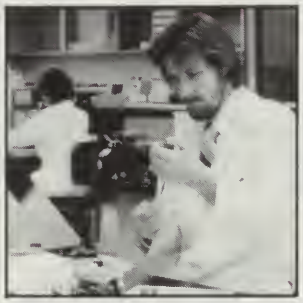
Changes in the delivery of health care have challenged the very foundation of the relationship between doctors and patients. The current crisis in medical malpractice is, more than anything, a crisis of trust. In a society that is constantly on the move, and in an era of increasing medical specialization, patients do not have time to develop lasting, trusting relationships with primary physicians. And physicians who have watched many of their peers -- other good doctors -- struggle through the trauma of a lawsuit are more and more hesitant to trust their patients.

Those who have pointed fingers at doctors, blaming bad medicine for the malpractice crisis, are finally realizing that it doesn't always take bad medicine to make a malpractice suit, but it often does take anger on the part of the patient. When physicians and patients approach each other with suspicion, an important therapeutic interaction is lost, and patients, as well as doctors, suffer.

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October 1988

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*Cover Photo by Michelle Dunn*: October in Allegany County, Maryland.

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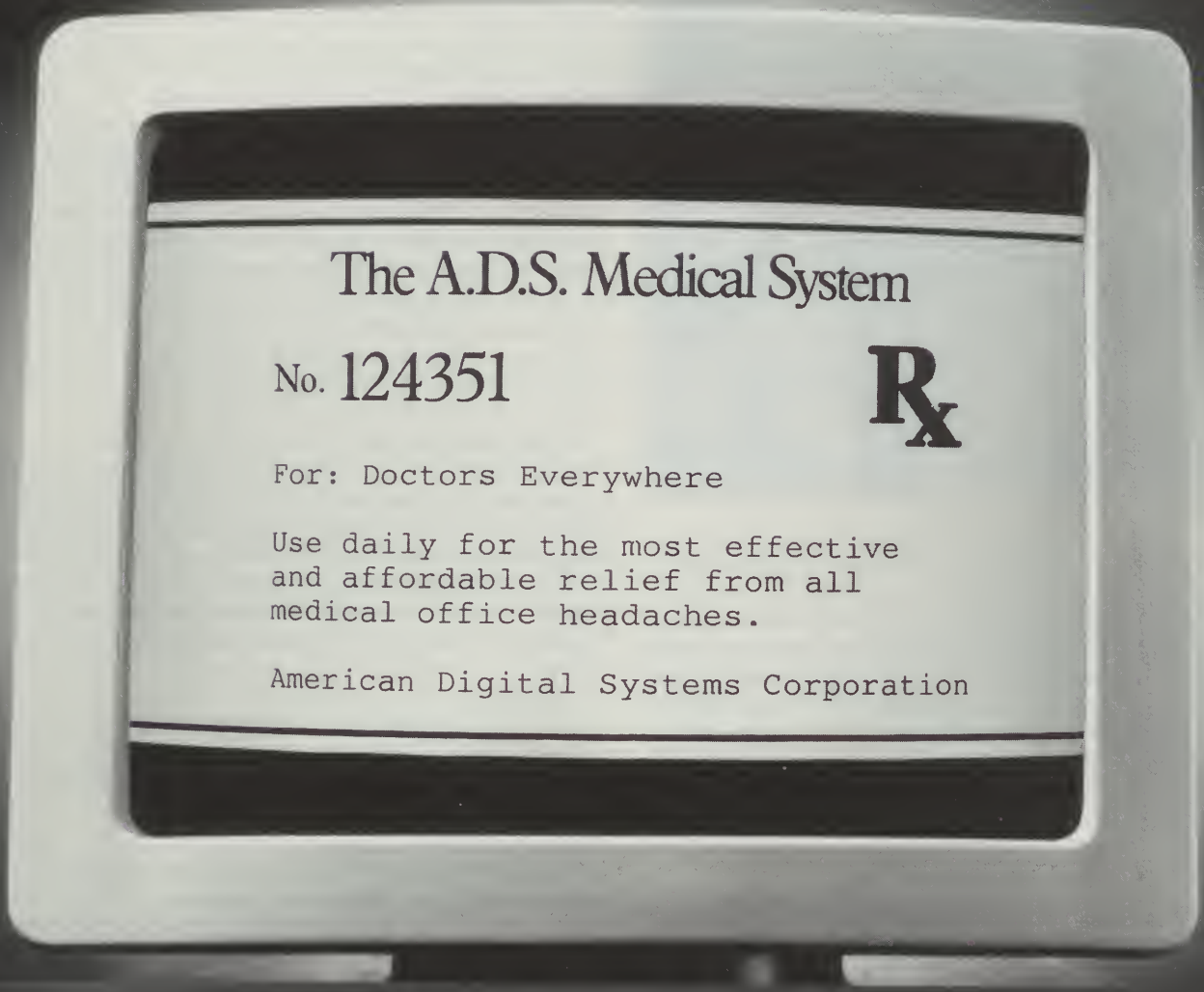
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# Members in the News



**Henry P. Laughlin** MD, ScD, ScSD served as the Grand Marshal of the 1988 National Independence Day Parade on July 4 in Washington, DC. Dr. Laughlin felt it was a great privilege and honor to review this year's national parade, which was dedicated to the 200th anniversary of the ratification of the US Constitution. He and his wife, Page, thoroughly enjoyed reviewing the some 4,000 parade members, including 31 noteworthy bands from around the nation and a dozen floats, in the three- hour parade down Constitution Avenue.

An internationally known psychiatrist, author, educator, US Navy veteran, NPS supporter and volunteer, and the Representative of the Sons of the American Revolution, Dr. Laughlin is respected throughout Maryland as a true American patriot. In his appearance as Grand Marshal, Dr. Laughlin demonstrated not only that he is an appropriate representative for the nation but also proved to be an exceptional representative for medicine.

Dr. Laughlin's continuous concern for medicine was evident during the parade when a Coast Guard cadet suddenly collapsed near the reviewing stand. Dr. Laughlin witnessed Dr. Michael Dobridge, President of Med Chi, leaving the stand and promptly resuscitating the cadet who was suffering from heat exhaustion. Following the parade, Dr. Laughlin requested that Dr. Dobridge be appointed Aide to the Grand Marshal. Dr. Laughlin's endeavor to recognize of the efforts of fellow physicians is highly commendable.

A native of Hagerstown and 27-year resident of Frederick County, Dr. Laughlin has specialized in psychiatry for 40 years in Chevy Chase, Bethesda and the Frederick area. Married to Marion Page Durkee of Philadelphia in 1941, Dr. Laughlin and his wife are the proud parents of five children and have twelve grandchildren.

Dr. Laughlin was a student at Ursinus College and The Johns Hopkins University, and received his MD degree from Temple University, Philadelphia, in 1941. He has served as Distinguished Visiting Professor at the University of Louisville School of Medicine since 1974. He was Clinical Professor of Psychiatry at George Washington University Medical School from 1977 to 1983 and a member of the faculty for 35 years. He is a Lifetime Member of the Board of Directors at Ursinus and a member of the President's Round Table as well as the Board of Associates of Hood College in Frederick. He holds an honorary Doctor of Science degree from Ursinus, an honorary Doctor of Social Science from the University of Louisville and is an honorary Fellow. In May of this year, Ursinus instituted the Laughlin Professional Achievement Award to honor their distinguished alumnus.

Dr. Laughlin was the Founder and First President of the distinguished American College of Psychiatrists. In 1979, he was elected Honorary Life President of the American College of Psychoanalysts where he served as the first and the eighth president. In 1982 he was elected Lifetime Honorary President by the American Society of Physician Analysts. He has served as president of the National Psychiatric Endowment Fund since its establishment in 1957.

A past president of the Montgomery County Medical Society, Dr. Laughlin was selected to become a lifetime member of the Washington Medical and Surgical Society in 1975. He is Founder and Former President of the Washington Psychiatric Society and the Suburban Maryland Chapter.

Currently Dr. Laughlin is on the Med Chi Council as the representative of Frederick County, having served as Montgomery County representative for eleven years. On April 23, 1988, the Faculty initiated the Laughlin Awards Program in honor of their illustrious member.

He has published numerous articles, chapters, editorials, reviews, and medical books, including: *The Neuroses in Clinical Practice* (1956), *Mental Mechanisms* (1963), *The Neuroses* (1967, 1970), and *The Ego and Its Defenses* (1970, 1979). He has held editorial posts with several professional journals and was an advisory and consulting editor for *Psychosomatics* for ten years.

## Authors of Articles

Along with manuscripts submitted to MMJ, please send an IBM compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program. At your request, MMJ will return your disk after your article is published or if your manuscript is not accepted.

**Robert C. Karlsberg** MD received the 1988 Georgetown University School of Medicine Award for Excellence in Medical Student Teaching in Psychiatry at the spring 1988 commencement ceremony.

• • •

**John M. Krager** MD, MPH was recently reappointed to the Maryland State School Health Council, where he has served as Chairman. The Council, an advisory council to the Maryland State Department of Health and Mental Hygiene and the Maryland State Department of Education, performs valuable work for the betterment of the health of school age children in Maryland.

• • •

**Joseph A. Mead Jr.**, MD, Baltimore, Mercy Hospital's Executive Vice-President for Medical Affairs, was the recipient of the Maryland Hospital Association's 1988 Distinguished Service Award. Dr. Mead has served on the Association's Executive Council, Council on Rate Regulation, and chaired its Professional Practices Committee, in addition to leading many special task forces and panels.

• • •

**Hamilton Moses III** MD has been appointed vice-president for medical affairs of The Johns Hopkins Hospital. He will be responsible for medical program planning and day-to-day clinical operations of the Hospital; Dr. Moses also will coordinate clinical services among Hospital departments, provide guidance on medical issues and coordinate the Hospital's relationship with the School of Medicine's clinical programs and with external accrediting and auditing agencies. In addition, quality assurance and risk management will be among his responsibilites.

Vice-chairman of clinical neurosciences and an associate professor of neurology at Hopkins, Dr. Moses will continue to see patients as director of the Parkinson's Disease Center at the Hospital. His current research focuses on extrapyramidal pharmacology, managment of medical organizations, and quantification of the cost and burden of chronic illnesses.

A native of Chicago, he received a BA in psychology at the University of Pennsylvania in 1972 and his MD from Rush Medical College (Chicago) in 1975. Dr. Moses served both an internship in medicine and a residency in neurology at Hopkins. In 1980, he was named deputy director of the Hopkins Department of Neurology; in 1986, vice-chairman of clinical neurosciences.

**Robert E. Reynolds** MD, associate dean for administration and hospital affairs of The Johns Hopkins School of Medicine, will become senior associate vice-president for health sciences at the University of Virginia in August. He will be chief of staff in the office of the vice-president for health sciences, focusing mainly on coordination of activities between the University Hospital, School of Medicine and its Health Care Foundation, and the School of Nursing.

Reynolds, as associate dean at Johns Hopkins since April 1981, was responsible for oversight of the medical practice plan, hospital relations, facilities management, governmental relations, and information systems. Among his major accomplishments were the development of a medical information systems strategy for the School of Medicine, including the implementation of the new Computer Science Laboratory and computerization of the Welch Medical Library.

• • •

**Michael J. Stanton** MD recently was named to a three-year term on Bethesda's Suburban Hospital's Board of Trustees. Dr. Stanton, a board-certified urologist, has been a member of Suburban's Medical Staff since 1982. He graduated magna cum laude with a BS degree from The American University and received his medical degree from Georgetown University School of Medicine, where he graduated cum laude with outstanding honors in surgery and pathology. He completed his internship at Grady Memorial Hospital, Emory University, Atlanta, and a residency in urology at Georgetown University.

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**ad·dict** \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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**References:**

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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# Letter to the Editor

## More Bluefish "Perils"

In his otherwise excellent article, "Perils of Bluefish," *MMJ* June 1988, Dr. Lange omitted three extremely common risks:

a. excitement-induced dysrhythmia
b. spouse abuse ("fishing widow" syndrome)
c. intermittent (seasonal and tidal) abandonment of employment

*HARRY W. SMITH MD*
Forest Hill

• • •

## The Lessons of Selectcare

Our local paper announced the demise of Selectcare. This untimely death was caused by FFTT (financial failure to thrive). Detailed autopsy findings have not been made public.

Selectcare was only four years old and had led a turbulent life, somewhat like an oceanic volcano. There was a fiery beginning that disrupted the calm, then a cooling off and decline, then it slipped beneath the surface.

I was there for the beginning as an observer. I was amazed back in in 1984 that such a thing could happen. No notice, no public planning, no time to weigh the alternatives. With embarrassment, I now confess I had personal feelings back then: the birth seemed illegitimate.

I felt betrayed by an insurance company. It seems juvenile now, but I always thought that physicians, insurers, hospitals, and patients were somehow a team with a common goal of efficient health care.

Please forgive the naivete, but I have matured since 1984. I even have an invisible combat ribbon earned while serving on the MFHC (Maryland Foundation for Health Care) board.

The passing of Selectcare will be only a footnote to the countless programs now living (and reproducing) everywhere. "Managed care" is the rubric. The logic of it all is so simple - it should work in all its forms, but why does it so often sound like a chain letter? "Everybody will profit, and the patient will get better care."

The concept is backed by "helpful" studies. Hasn't HCFA told us about hospital mortality risks? Aren't they promising to detail which doctors are better and more effective? Once we have the "facts," won't we be able to plan and manage health care even better?

Well, I hope so; but please take a minute to observe the passing of Selectcare. Don't we all (practitioners, hospital administrators, insurers, patients, and media) have a lot to learn? Let's face it, we don't know enough about human communication, about how to measure interactions.

So the next time you hear someone announce a plan to better the world of health care, remember Selectcare. What can we learn from or teach to one another to plan the next Selectcare together? We should be able to com-

pete without bitterness and to create a healthful environment where "managed" care and just plain care both work. To fail in this will mean that each of us, when the time comes to be a patient, will be left without trust and with "caveat emptor" as our only slogan.

*JOHN W. BUCKLEY MD,* **Past President (1984)**
**Baltimore County Medical Association**

• • •

## Inequities/Inequalities in the Outcome of Rehabilitation

Two recent studies at the same Maryland rehabilitation facility suggest that men make greater functional gains than do women during the course of rehabilitation.[1,2] These studies were conducted on different cohorts of patients with different diagnoses. In the first study, Garg *et al.* found that white female stroke patients had lower functional scores on discharge than did other stroke patients.[1] In the other study, we found that spinal-cord-injured (SCI) males make greater functional gains than do female patients. Both studies were adjusted analyses for many known and potential confounding variables such as age, education, and occupational status as well as functional status on admisssion.

Whether these findings represent actual gender differences in rehabilitation outcomes is unclear. If so, the reasons for these differences need investigation. It is conceivable that psychological or even biological differences exist that can account for differing rates of recovery with the same illness. Or perhaps gender is serving as a proxy for some other unmeasured differences between these two groups.

If rehabiliation is less able to improve the functional status of women, we need to assess the care we provide and to develop new strategies to make this service more equitable. Review of the literature reveals only one study of the increased prevalence of women with SCI in Switzerland.[3] We could find no other studies that examine the differing rates of recovery. Further research focused on gender differences is needed to examine this potential problem in the practice of rehabilitative medicine.

*ROBERT S. EPSTEIN* **MD**
**University of Maryland Medical School**
**Department of Epidemiology and Preventive Medicine**

*JAMES P.G. FLYNN* **MD, MPH, Director**
**Montebello Rehabilitation Hospital**
**University of Maryland Medical System**
**Baltimore**

### References

1. Garg R, Santanello N, Kessler II, Flynn JPG, Maloof M, Reich L. Stroke rehabilitation outcomes at Montebello Hospital. MMJ, 1987;36:507-11.
2. Epstein RS, Struewing JP, Lefkowitz A et al. Secular changes in case mix of SCI patients at Montelbello Rehabilitation Hospital. MMJ, 1988;37:291-96.
3. Kuhn W., Zach GA, Kochlin P, Wuwyler A. Comparison of spinal cord inuries in females and in males, 1979-1981 Basle. Paraplegia, 1983;21:154-60.

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Complete **Information for Authors**
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September 1988, page 708

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- ☐ Wings Over the Nile

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## "Organ Annie" and "Health Yourself"

Organ Annie" came to live in Montgomery County three years ago when the Auxiliary to the Montgomery County Medical Society put together "Health Yourself," a program to promote health and wellness for young children. Organ Annie, a soft-sculptured, four-foot doll with removable calico organs inside her zippered abdomen, was first introduced at Health Yourself, a month-long series of seminars held in the county libraries and sponsored by the Montgomery County Auxiliary.

Organ Annie is especially interesting to primary school children who are just learning about their bodies. Using a storybook that tells the "Inside Story," storytellers fascinate children with how the food is digested, what happens to lungs if people smoke, and how kidneys take away waste. This is part of helping children between the ages of 3 and 12 learn about and respect their bodies and the importance of not using cigarettes and drugs.

The Montgomery County Public School recognized Annie as an exceptional learning enrichment aid and have requested a doll for each of its 138 elementary schools. Soon Organ Annie will be available in other Maryland counties. She may even attend Med-Chi's 1989 Annual Meeting.

The is an important and large project. The Montgomery County Auxiliary is seeking help in either financing or fabricating a doll and/or dolls. Some of their participants and co-sponsors include: Montgomery County Public Libraries, MCHD Division of School Health Services, American Heart Association, American Cancer Society, Giant Food, MDIPA, and the Child Care Division, Montgomery County Government. Please present Annie to your service group as a vital community service project, and share with us the joy of educating our children.



*Auxliary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Eva Edmonds President; Mrs. Betty J. Molz Editor.*

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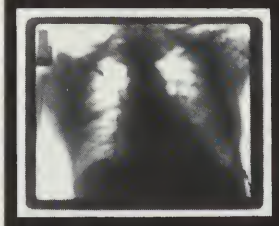
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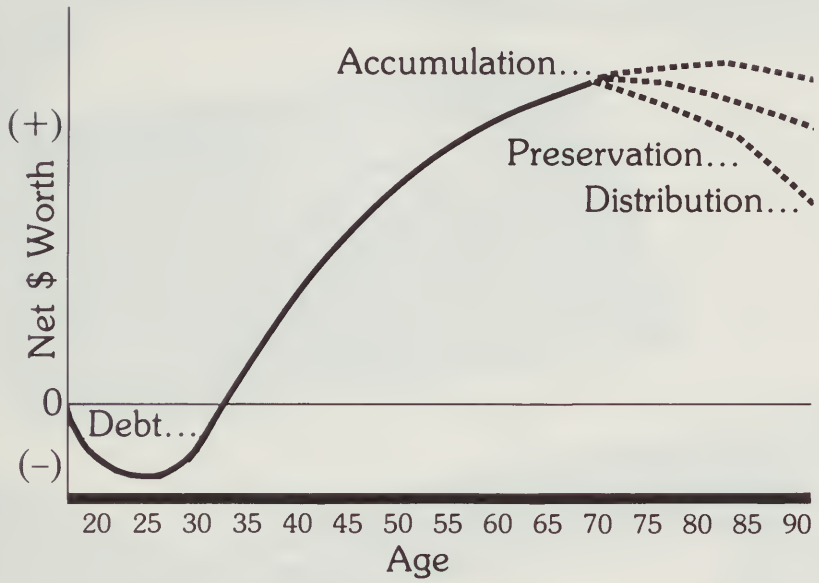

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# Executive Director's Newsletter

OCTOBER 1988

**MEDICARE CARRIER WARNING LETTERS**

Medicare carriers will be issuing warning letters to physicians who may have violated their 1988 Maximum Actual Allowable Charge (MAAC) limitations. Last year, physicians could comply if their <u>average</u> charges were within MAAC limits. This year, however, the MAAC absolute limits apply each time a service is rendered. According to the AMA, HCFA states that the letters are intended to promote communication between physicians and carriers and advises that physicians who receive such letters will be subject to increased monitoring. Physicians who successfully negotiate with their carrier can avoid having their cases referred to their HHS Inspector General for sanctions or fines. HCFA recommends that refunds be issued where actual violations have occurred. Any physician experiencing a problem in resolving a MAAC dispute should write Med-Chi, Attn: Third Party Liaison Committee.

**HCFA DATA REQUESTS**

Some requests to provide data to a Medicare carrier may not be authorized by the HCFA. Physicians are urged to investigate the authorization for <u>all</u> requests for information by calling their Component Medical Society or Med-Chi.

Although HCFA has requested Part B carriers to prepare proposals to develop a Registry of all practitioners who provide services under Medicare, HCFA has assured the AMA that it does <u>not</u> plan to implement specific collection efforts for this project. However, at least one carrier has mailed out a lengthy questionnaire to physicians and demanded its completion. When alerted to this situation by the AMA, HCFA made clear that the questionnaire had <u>not</u> been authorized.

**BOARD OF PHYSICIAN QUALITY ASSURANCE**

The Faculty has petitioned the Board of Physician Quality Assurance for a Declaratory Ruling on whether the law that provides for suspension and ultimate revocation of a physician's license on conviction of a crime of moral turpitude or a plea of guilty or

nolo contendere with respect to a crime of moral turpitude applies to a physician who receives probation before judgement.

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

Prince George's and Montgomery Counties have been selected as the site of a dress rehearsal of the 3rd National Health and Nutrition Examination Survey (NHANES III), from September 13 through November 15. The purpose of the rehearsal is to train staff and refine interview and examination procedures before the nationwide survey begins in October. The data collected will be used to estimate the prevalence and risk factors of major diseases, nutritional disorders, and will serve as the basis for national standards of measurements such as height, weight, and blood pressure.

AMERICAN MEDICAL TELEVISION

This fall the AMA will launch "American Medical Television," a new medium for providing timely, focused, clinical and socio-economic information for practicing physicians, each Sunday from 10 to noon on The Discovery Channel. All physician members of Component Medical Society public relations committees should be made aware of this new communication tool.

RCT SLIDESHOW

A Registered Care Technologist (RCT) slideshow is now available through Med-Chi. The slides outline the proposal presented at the AMA House of Delegates Meeting in June. Contact Betsy Newman, Public Relations Assistant, at 301-539-0872 or 1-800-492-1056.

AIDS CONFERENCE

The Southern Maryland Health Systems Agency (SMHSA) will present "Military, Medical, Public, and Private Agencies Mobilization for HIV Infection and AIDS," at the Ramada Inn in Oxon Hill, MD on Wednesday, October 19, 1988, from 9:30 a.m. to 4:30 p.m. The $10 registration fee includes the conference, meals, followed by a social event. Congressman Steny Hoyer, Chairman of the House Task Force on AIDS, will be the luncheon speaker. Please call SMHSA at 301-868-6206 for registration forms.

Angelo J. Troisi, FACHE
Executive Director

# Quality Practice Digest

LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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## Billing for Laboratory Tests

In response to inquires about the appropriate manner in which to bill a patient for laboratory services ordered by the physician and provided by a laboratory, the following Ethical Opinion 107 from the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland (November 1984) applies:

107. Laboratory Referrals

.03 It is preferable that the laboratory, not the attending physician, bill and collect from the patient or third party payor for laboratory services. Where circumstances make this impractical or where increased costs to the patient would result, the bill submitted by the attending physician to his patient or third party payor should show the following:

(a) the name of the laboratory;
(b) a description of the services provided;
(c) the laboratory charges for the service; and
(d) the physician's fee for procurement and processing.

(See applicable Maryland law in the Health Occupations Article, 14-504 (17)).

.04 The attending physician is entitled to fair compensation for the professional services he renders. He is not engaged in a commercial enterprise, however, and any markup, commission, or profit on the services rendered by a laboratory is considered to be exploitation of the patient under Maryland law, see Health Occupations Article, §14-504 (11).

.05 A contractual agreement for a flat rate between a laboratory and a physician is generally not in the best interests of the patient, since it makes difficult, if not impossible, the

billing requirements of HO 14-504 (17), as the individual cost of each test cannot be determined. If such a contract is entered into by the physician, the physician should absorb the monthly contract charge into the office overhead. In such a case, no individual billing for laboratory test performance would take place. A true cost cannot be determined for specific tests under such a contract that allows a sliding scale of fees depending on the volume of tests performed.

.06 Therefore, it is unethical for a physician to:

(a) Submit specimens to any laboratories not professionally and adequately supervised in accordance with state laws and regulations;

(b) Bill in a manner not in accordance with previous statements of policy heretofore set forth;

(c) Send specimens to any laboratory rendering such services at a flat fee, unless the cost of such services is included as a cost of his normal office overhead;

(d) Have a financial interest in any clinical laboratory in exchange for referral, to that laboratory, of all the physician's lab work; or

(e) Collect fees from any third party payor to the patient for laboratory services not performed by him, or his regularly employed assistants, without full disclosure as enumerated in paragraph .03 of this statement.

---

## New Ethical Opinion on Health Care Facility Ownership

(The following ethical opinion was adopted by the Council in November 1987 and is a revision of Ethical Opinion 403 on Hospital Ownership by Physicians. The revision applies to ownership of all types of health care facilities by physicians. The ethical opinion is responsive to inquiries from physicians as to whether the physician can own or have an interest in a facility to which he will send his patients.)

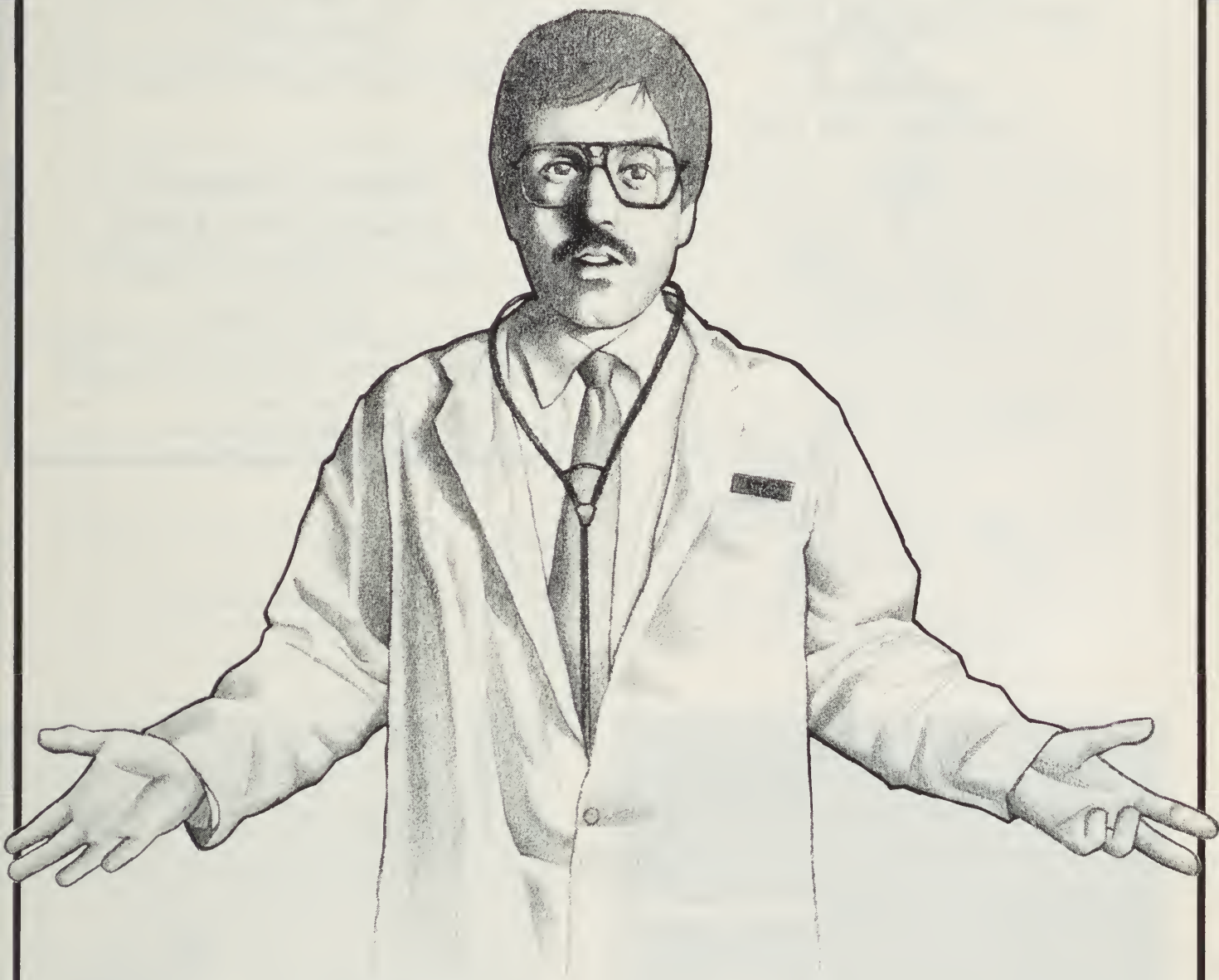
It is not inherently unethical for a physician to buy or own an interest in a hospital, clinic, or other health care facility. However,the use the physician makes of this ownership or interest may be unethical. For example, sending a patient to such a facility solely for the physician's financial benefit would be unethical.

When a physician has an interest in or owns a hospital, clinic, or other health care facility to which he sends his patients, he has an affirmative ethical obligation to disclose this fact to his patient.

Under no circumstances may the physician place his own financial interest above the welfare of his patients.

If a conflict develops between the physician's financial interests and the physician's allegiance to his patient, the conflict must be resolved to the patient's benefit.

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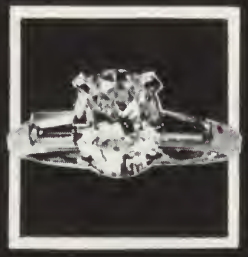
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# One Minute with Diabetes

## Honeymoon

*Doctor, what is meant by the "honeymoon period" of diabetes?*

The "honeymoon period" of diabetes probably gets its name from the honeymoon staus in life when everything seems to be going along well. Typically it is that stage when a newly diagnosed diabetic patient requires insulin in a decreased amount from that originally used and control is not difficult. For instance, a reduction from 20 units to 10 units of Lente in one daily dose with little or no glucosuria despite some variation in activity and food intake.

Everything goes smoothly, and both physician and patient begin think management of the problem is easy. Things procede well for a few weeks or a few months, and then almost "brittle" diabetes develops, requiring multiple doses of insulin and close supervision. The honeymoon is over.

The reason for the period of easy control is that some beta cells have resisted destruction and continued to function with the onset of diabetes. They provide supplemental insulin when needed and shut down when less insulin is needed. Gradually, these residual functioning cells are destroyed, and management of the diabetes becomes difficult. Research now being done with immunosuppressive agents may make it possible to prevent progression of the disease, and if treatment is instituted during the "honeymoon" that status can be maintained.

*DeWITT E. DeLAWTER* MD
Editor

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# New Guidelines for High Blood Pressure Management: Special Considerations, Drug Interactions, and Adverse Drug Effects

**The 1988 Report of the Joint National Committee (JNC) on Detection, Evaluation and Treatment of High Blood Pressure was recently released. Intended as a guide for practicing physicians and other health professionals in their care of hypertensive patients, this report was reviewed in Commentary last month. To augment that review, some special considerations are noted, and a table of adverse drug effects is provided.**

The National High Blood Pressure Education Program recently released the Joint National Committee Report on the Detection, Evaluation and Treatment of High Blood Pressure (JNC IV), which was published in its entirety in the May issue of *Archives of Internal Medicine*.[1] A listing of new and old drugs, recommended revised doses of some drugs, and a new scheme for individualized stepped-care therapy were presented in this column last month.[2]

Other factors should be considered in the selection of initial therapy, particularly for those patients with mild or uncomplicated hypertension who are likely to require only one drug.

- Blacks and older patients tend to respond better to diuretics or calcium antagonists than to beta-blockers or ACE inhibitors. Gender has not been found to be a significant determinant of response to drugs.
- Antihypertensive drugs may worsen some diseases while improving other conditions. They also may interact with medications used to treat these problems, as shown in Table 1. For example, beta-blockers may worsen asthma and peripheral arterial disease, but they may improve angina pectoris, certain cardiac dysrhythmias, and migraine headaches. Awareness of the more common side effects of the various agents, listed in Table 2, is necessary to select drugs that may improve concomitant diseases or symptoms and to avoid those that may worsen them.
- Antihypertensive drugs may cause undesirable symptoms. For example, many of these agents may impair sexual function; centrally acting drugs may impair mental acuity; and beta-blockers may reduce exercise tolerance, as well as induce fatigue and sleep disorders in some patients.
- Physiologic and biochemical measurements: some health practitioners have found certain physiologic and biochemical measurements (for example, body weight, heart rate, plasma renin activity, resting electrocardiographic tracing, and hemodynamic functions) to be helpful in choosing specific therapy.
- Tranquilizers and sedatives are not effective in lowering blood pressure and should not be considered for use as antihypertensive therapy.

The cost of therapy may be a barrier to controlling hypertension. Treatment costs include not only the price of drugs but also the expense of laboratory tests, supplemental therapies, office visits, and time lost from work for visits to physicians' offices.

**Table 1. Drug Interactions in Antihypertensive Therapy**

Diuretics
- Diuretics can raise lithium blood levels by enhancing proximal tubular reabsorption of lithium.
- Nonsteroidal anti-inflammatory agents, including aspirin, may antagonize antihypertensive and natriuretic effectiveness of diuretics
- Angiotensin-converting enzyme (ACE) inhibitors magnify potassium-sparing effects of triamterene, amiloride, or spironolactone.
- ACE inhibitors blunt hypokalemia induced by thiazide diuretics.

Sympatholytic agents
- Guanethidine monosulfate and guanadrel sulfate: Ephedrine and amphetamine displace guanethidine and guanadrel from storage vesicles. Tricyclic antidepressants inhibit uptake of guanethidine and guanadrel into these vesicles. Cocaine may inhibit neuronal pump that actively transports guanethidine and guanadrel into nerve endings. These actions may reduce antihypertensive effects of guanethidine and guanadrel.
- Hypertension can occur with concomitant therapy with phenothiazines or sympathomimetic amines.
- Monoamine oxidase inhibitors may prevent degradation and metabolism of released norepinephrine produced by tyramine-containing foods and may thereby cause hypertension.
- Tricyclic antidepressant drugs may reduce effects of clonidine and guanabenz.

β-Blockers
- Cimetidine may reduce bioavailability of β-blockers metabolized primarily by liver by inducing hepatic oxidative enzymes. Hydralazine, by reducing hepatic blood flow, may increase plasma concentration of β-blockers.
- Cholesterol-binding resins, ie, cholestyramine and colestipol, may reduce plasma levels of propranolol hydrochloride.
- β-Blockers may reduce plasma clearance of drugs metabolized by the liver (eg, lidocaine, chlorpromazine, coumarin).
- Combinations of calcium channel blockers and β-blockers may promote negative inotropic effects on the failing myocardium.
- Combinations of β-blockers and reserpine may cause marked bradycardia and syncope.

ACE inhibitors: Nonsteroidal anti-inflammatory drugs, including aspirin, may magnify potassium-retaining effects of ACE inhibitors.

Calcium antagonists
- Combinations of calcium antagonists with quinidine may induce hypotension, particularly in patients with idiopathic hypertrophic subaortic stenosis.
- Calcium antagonists may induce increases in plasma digoxin levels.
- Cimetidine may increase blood levels of nifedipine.

*HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.*

Impressive gains in hypertension control have contributed to a 50 percent decline in the national age-adjusted stroke mortality rate and a 35 percent decline in coronary artery disease mortality over the past 16 years. For the progress to continue, the hypertension control process must be extended to the entire population and aggressive treatment must take into consideration the lifestyles and concomitant conditions of individual patients. The availability of an increased variety of therapeutic approaches provides the opportunity to improve hypertension control while minimizing adverse effects; it is for this reason this column is dedicated to emphasizing special considerations for selecting therapy and reviewing drug interactions with antihypertensive agents and their recognized adverse effects.

## References


1. The 1988 Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. Arch Intern Med 1988;148: 1023-38.
2. Revision of Guidelines for High Blood Pressure Therapy. MMJ 1988;37: 698-701.


**Table 2. Adverse Drug Effects**

| Druga | Selected Side Effectst | Precautions and Special Considerations |
|---|---|---|
| Diuretics‡ | | |
| Thiazides and related sulfonamide diuretics | Hypokalamia, hyperuricamia, glucose intolerance, hypercholastaremia, hypertriglycaridemia, sexual dysfunction, weaknass | May be ineffective in renal failura; hypokalamia increases digitalis toxicity; mey precipitata acuta gout; may cause an increase in blood lavels of lithium |
| Loop diuretics | Sama as for thiazides | Effective in chronic renal failure; hypokalamia and hyperuricemie as above |
| Potassium-sparing agents | Hyperkalamia | Danger of hyperkalamia or renal failure in petients treated with ACE inhibitor or nonsteroidal anti-inflammatory drug; may increase blood lavals of lithium |
| Spironolactone | Gynecomastia, mastodynia | Interferes with digoxin immunoassay |
| Triamterene | . . . | Dangar of renal calculi |
| Amiloride | . . . | . . |
| Adrenergic inhibitors | | |
| β-Adrenergic blockars§ Acebutolol Atenolol Metoprolol Nadolol Penbutolol sulfata Pindolol Propranolol hydrochloride Timolol | Bronchospasm, peripheral arterial insufficiency, fatigue, insomnia, sexual dysfunction, axacarbation of congestive heart failure, masking of symptoms of hypoglycemia, hypartriglyceridemia, decreased HDL cholesterol (axcapt for pindolol and acabutolol) | Should not be used in patients with asthma, COPD, congestive heart failure, haart block (>first-degree), and sick sinus syndrome; use with caution in insulin-treated diabetic patients and patients with peripheral vascular disease; should not be discontinued abruptly in patients with ischamic hearf disease |
| Centrally acting adrenargic inhibitors | | |
| Clonidine | Drowsiness, sedation, dry mouth, fatigue, sexual dystunction | Rebound hypertention may occur with abrupt discontinuance, particularly with prior edministration of high doses or with continuation of concomitant β-blocker therapy |
| Guanabenz | As above | As above |
| Guenfacine hydrochlorida | As above | As above |
| Mathyldopa | As above | May cause liver demage and Coombs-positive hemolytic anemia; usa cautiously in elderly patianta because of orthostatic hypotansion; intarferes with measurements of urinary catacholaminas lavels |
| Clonidine TTS (Patch) | As above; localized skin reaction to tha patch | . . . |
| Peripheral-acting edrenergic inhibitors | | |
| Guanadrel sulfata | Diarrhea, sexual dystunction, orthoatatic hypotension | Use cautiously because of orthostatic hypotension |
| Guanethidine monosultate | Sama as for guanadral | Same as for guenadrel |
| Rauwolfia alkaloids | Lethargy, nasal congastion, depresaion | Contraindicated in patiants with history of mantal depression; usa with caufion in patients with history of peptic ulcar |
| Reserpina | Same es for rauwolfie alkaloids | Sama es for rauwolfia alkaloids |
| $\alpha_1$-Adrenargic blockars | | |
| Prazosin hydrochloride | 'First-dose" syncope, orthostatic hypotension, weakness, palpitations | Usa cautiously in aldarly patients because of orthostatic hypotension |
| Tarazosin hydrochlorida | As abova | As above |
| Combined α-β-adrenargic blocker: Labetalol§ | Bronchospasm, peripharal vascular insufficiancy, orthostetic hypotension | Should not be used in patiants with asthma, COPD, congestive heart failure, haarf block (>first-degrea), end sick sinus syndroma; use with ceufion in insulin-treated diabetic patiants and petiants with peripheral vascular disease |
| Vasodilators | Haadacha, tachycardia, fluid retantion | Mey precipitate engine pectoris in patients with coronery artary disease |
| Hydralazine | Positive entinuclaar antibody test | Lupus syndroma may occur (rare at recommended doses) |
| Minoxidil | Hypertrichosis | Mey causa or aggravate plaural and pericardial affusions; may precipitate angina pectoria in patients with coronary artery disease |
| ACE inhibitors | | |
| Inhibitors | Rash, cough, angioneurofic edama, hyperkalamia, dysgeusia | Can cause revarsible, acute, renal failura in patients with bilateral renal artarial stanosis or unilataral stenosis in a solitary kidney; protainuria may occur (rara at recommanded doses); hyperkalemia can develop, particularly in patients with renal insufficiency; rerely can induce neutropenia; hypofansion has baan observed with inifiation of ACE inhibitors, aspecially in patients with high plasma renin activify or in thosa receiving diuretic tharapy |
| Calcium antagonists | Edeme, headache | Use with caufion in patienta with congastiva heart failure; contraindicated in patiants with sacond- or third-dagree haart block |
| Verapamil | Constipation | May cause livar dystuncfion |
| Diltiazam hydrochloride | Constipation | May cause livar dysfunction |
| Nifedipine | Tachycardia | . . . |
| Nitrandipine | Tachycardia | . . . |

*Sexual dysfunction, particularly impotanca in man, has baan reportad with the usa of all antihypertansive agents. ACE indicators angiotensin-convarting enzyme; HDL, high-densify lipoprotein; and COPD, chronic obstructiva pulmonary diseasa.
†The liating of aida effects is not all-inclusive, and health practitioners ara urged to refer to tha package insert for a more datailed listing.
‡See Table 3 for a list of these drugs.
§Suddan withdrawal of thase drugs may be hazardous in patiants with heart diseasa. Sae Table 3 for e list of thesa drugs.

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OCTOBER 1988

# 1988-1989 RECOMMENDATIONS FOR USE OF INFLUENZA VACCINE

The U.S. Public Health Service, Immunization Practices Advisory Committee (ACIP), has published its recommendations for the prevention and control of influenza for the 1988-1989 season (MMWR 1988;37:361-364;369-373). The standard trivalent vaccine, with seasonal antigenic modifications, is recommended for high-risk persons, their health-care providers, and their household contacts.

## TIMING:

The development of a protective response following vaccination takes about two weeks. Programs for administration of the 1988-1989 trivalent vaccine to high-risk persons should begin prior to the start of the influenza season, usually in December.

## VACCINE COMPOSITION:

The 1988-1989 trivalent influenza vaccine contains 15 µg each of A/Taiwan/86 (H1N1), A/Sichuan/2/87 (H3N2), and B Victoria/2/87 hemagglutinin in each 0.5 ml.
Note: Remaining 1987-1988 vaccine should not be used.
See Table 1, below, for dosage, by age of patient.

**TABLE 1. Influenza vaccine* dosage, by age of patient — 1988–89 season**

| Age Group | Product† | Dosage§ | Number of Doses | Route¶ |
|---|---|---|---|---|
| 6–35 mos | Split virus only | 0.25 mL | 1 or 2** | IM |
| 3–12 yrs | Split virus only | 0.50 mL | 1 or 2** | IM |
| >12 yrs | Whole or split virus | 0.50 mL | 1 | IM |

*Contains 15 µg each of A/Taiwan/1/86 (H1N1), A/Sichuan/2/87 (H3N2), and B/Victoria/2/87 hemagglutinin antigens in each 0.5 mL. Manufacturers include Connaught (Fluzone® whole or split, distributed by E.R. Squibb & Sons); Parke-Davis (Fluogen® split); and Wyeth Laboratories (Influenza Virus Vaccine, Trivalent® split). For further product information, call Connaught (800)822-2463, Parke-Davis (800)223-0432, and Wyeth (800)321-2304.
†Because of the lower potential for causing febrile reactions, only split virus (subvirion) vaccine should be used in children. Immunogenicity and side effects of split and whole virus vaccines are similar in adults when vaccines are used according to the recommended dosage.
§It may be desirable to administer influenza vaccine to high-risk children when they receive routine pediatric vaccines, but in a different site. Although studies have not been conducted, simultaneous administration should not lessen immunogenicity or enhance adverse reactions.
¶The recommended site of vaccination is the deltoid muscle for adults and older children. The preferred site for infants and young children is the anterolateral aspect of the thigh.
**Two doses are recommended for children ≤12 years old who are receiving influenza vaccine for the first time.

**PRIORITY TARGET GROUPS FOR SPECIAL VACCINATION PROGRAMS:**

1. Groups at greatest medical risk of influenza-related complications:

   A. Adults and children with chronic diseases of the cardiovascular or pulmonary systems that have required regular medical follow-up or hospitalizations during the preceding year, including children with asthma.

   B. Residents of nursing homes or other chronic care facilities housing patients of any age with chronic medical conditions.

2. Groups at moderate risk of influenza-related complications:

   A. Otherwise healthy individuals 65 years of age or older.

   B. Adults and children with chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression.

   C. Children (age 6 months to 18 years old) receiving long-term aspirin therapy, who may be at risk of developing Reye's syndrome following influenza infection.

3. Groups potentially capable of nosocomial transmission of influenza to high-risk persons:

   A. Physicians, nurses, and other personnel who have extensive contact with high-risk patients (e.g., primary care and certain specialty clinicians, staff of intensive care units, particularly neonatal intensive care units).

   B. Providers of home care to high-risk persons (e.g., visiting nurses, volunteer workers) as well as all household members of high-risk persons, including children, whether or not they provide care.

**VACCINATION OF OTHER GROUPS:**

1. Influenza vaccine should be administered to any person who wishes to reduce his/her risk of acquiring influenza infection. Persons who provide essential community services may be considered for vaccination to minimize the disruption of essential activities during severe epidemics.

2. Pregnant women who have medical conditions that increase their risk of complications from influenza should be vaccinated. Administering the vaccine after the first trimester is a reasonable precaution to minimize the

theoretical risk of teratogenicity. However, it is undesirable to delay vaccination of pregnant women with high-risk conditions who will still be in the first trimester of pregnancy when the influenza season begins.

3. Persons infected with human immunodeficiency virus (HIV) have increased infections and complications caused by various respiratory pathogens. Similar increases due to influenza have not been reported during recent epidemics. Nevertheless, because influenza may result in serious illness and complications in some HIV-infected persons, vaccination is a prudent precaution.

**PERSONS WHO SHOULD NOT BE VACCINATED:**

Inactivated influenza vaccine should not be given to persons who have an anaphylactic hypersensitivity to eggs. Persons with acute febrile illnesses should not usually be vaccinated until their temporary symptoms have abated.

**SIDE EFFECTS AND ADVERSE REACTIONS:**

The most frequent side effect of vaccination with influenza vaccine is soreness around the vaccination site for up to 1 to 2 days; this occurs in less than one-third of the vaccinees. In addition, the following two types of systemic reactions have occurred:

1. Fever, malaise, myalgia, and other systemic symptoms occur infrequently and most often affect persons who have had no exposure to the influenza virus antigens in the vaccine. These reactions begin 6-12 hours after vaccination and can persist for 1 or 2 days.

2. Immediate, presumably allergic reactions such as hives, angioedema, allergic asthma, or systemic anaphylaxis occur extremely rarely after influenza vaccination. These reactions probably result from hypersensitivity to some vaccine component, most likely residual egg protein.

**ANTIVIRAL AGENTS FOR INFLUENZA A:**

Amantadine hydrochloride is the only antiviral drug approved for marketing in the United States that has specific activity against influenza A viruses. Amantadine interferes with the replication cycle of type A influenza viruses. It is 70%-90% effective in preventing illnesses caused by naturally occurring strains of influenza A virus, when administered within 24-48 hours after the onset of symptoms. Amantadine is <u>not</u> effective against type B influenza. Amantadine can be given for prophylaxis or for treatment. The dosage should be determined based on the age, renal function, and neurologic status of the patient (see MMWR, 1988;37:373.

# HEPATITIS A

As of August 23, 1988, 203 cases of hepatitis A have been reported to the Maryland Department of Health and Mental Hygiene, a 28% increase over the same period for 1987. Eight outbreaks of hepatitis A have been reported during 1988. The outbreaks have been associated with food-service facilities, day care and school settings, and family and community groups.

Health departments are providing cases and contacts with information on the symptoms of hepatitis and on the recommended prophylaxis for families and other close contacts. As a result, clinicians may be seeing more requests for immune globulin (IG) or more patients with symptoms compatible with hepatitis A.

We would like to remind clinicians of several important points in the diagnosis and management of hepatitis A:

**DIAGNOSIS:** Diagnosis of acute hepatitis A is confirmed by the presence of IgM antibody to hepatitis A virus (HAV) in serum collected during the acute phase or the early convalescent phase of disease.

**SOURCE OF HAV:** Transmission of HAV is fecal-oral. Persons diagnosed with hepatitis A should be interviewed for risk factors of hepatitis A. These include: 1) attending or working in a nursery, day care center, or preschool; 2) being a household contact of a child or employee in a nursery, day care center, or preschool; 3) being a contact of a confirmed or suspected hepatitis A case; 4) suspected of being part of a common-source foodborne or waterborne outbreak; 5) international travel.

**POTENTIAL SPREAD:** Cases of hepatitis A should be interviewed to determine their occupation (especially food-handling), potential groups exposed (such as day care contacts), and their household, sexual, and other close contacts.

**REPORTING:** All cases of hepatitis A should be reported promptly to the local health department to assist in early prophylaxis of contacts and recognition of possible outbreaks. The health department can assist in making recommendations for day care centers, restaurant contacts, etc.

**PROPHYLAXIS AND PREVENTION:** IG should be given to contacts as soon as possible after exposure and usually within two weeks of exposure. A single intramuscular dose of immune globulin (0.02 ml/kg) is recommended for post-exposure prophylaxis. Strict handwashing after using the bathroom , after diapering, and before preparing food is essential.

More complete information and recommendations on hepatitis A can be found in the Morbidity and Mortality Weekly Report (MMWR) 1985;34:313-324;329-325.

## Follow-up of the Cancer Patient

The follow-up is part of the overall cancer management. While some investigators doubt its value in certain tumors,[1] most oncologists believe it is almost as important as the treatment itself.[2,3] Cancer patients can be classified into two main groups:

1. Those who underwent potentially curative therapy, should be initially evaluated and staged, then followed every 3 months for 3 years, then every 6 months. Such a follow-up is required for several reasons:

   (a) To administer adjuvant therapy if applicable. Such therapy is usually initiated 2-4 weeks postoperatively, and occasionally preoperatively in an attempt to prevent or at least delay recurrences or metastases.

   (b) To measure the disease-free survival.

   (c) To detect early recurrences or metastases that can be successfully treated avoiding late complications. Once recurrence is detected, all effort should be made to document it histologically. In addition, complete work-up of the patient is in order to assess the extent of the disease.

   (d) To measure the overall survival.

Therefore, such data should be made available to the tumor registry of the hospital, which correlates the results and report back to the treating physicians.

2. Patients who are receiving palliative therapy are usually seen and evaluated more often. Such patients are evaluated for regression or progression of their disease. While surgery and radiation therapy usually are used for the management of local recurrences, chemotherapy, hormonal therapy, and a combination of both are applied for systemic control. However, this is not absolute, as surgery may be used to eliminate distant metastases with good palliative results, such as liver resections for metastatic carcinoma to the liver. Another example is the use of radiation therapy to spinal and brain metastases. As a general rule immunotherapy has no role in the management of metastases. However, intralesional BCG injections for local recurrences have been proved beneficial. The management of complications that may arise from the disease or the treatment can play a major role in palliating the cancer patients.

While some primary tumors metastasize to the regional lymph nodes then systemically, others metastasize systemically without regional metastases. That is important to keep in mind during the follow-up. There are two components to the follow-up: physical examination and laboratory tests. The physical examination should include evaluation for local recurrence, regional metastases, distant metastases, as well as to rule out new primary lesions.

Cancer patients have 7 to 17 percent chance of developing a new primary unrelated to the first malignancy. The laboratory tests are performed every 3 to 6 months initially depending on the stage of the disease. Such periods can be doubled after the first 3 years if there is no evidence of recurrence or metastasis. Laboratory tests include complete blood count with white cell differential and actual platelet count, blood chemistries including liver function tests and especially serum alkaline phosphatase, peripheral blood markers, and chest x-ray. Other special studies may include radiological studies, endoscopies, occult blood, and others, depending on the case.

CAT scans and bone nucleotide scans are not to be repeated unless there are clinical or laboratory reasons, for example, bone pain or elevated serum alkaline phosphatase. Elevated serum alkaline phosphatase may indicate bone or liver involvement by the tumor, but it is occasionally noted in patients with fatty infiltrate of their liver. It also can be due to drug toxicity. Hypercalcemia does not always indicate bone involvement, but may express disease progression, as some tumors do secrete parathormone-like hormone.

Anemia could be secondary to toxicity from chemotherapeutic agents, infiltration of the bone marrow by tumor, or blood loss from another primary such as large bowel cancer. Another example is elevated serum lactic dehydrogenase (LDH) in patients with lymphoma, chronic lymphocytic leukemia, oat cell carcinoma, some adenocarcinomas, pheochromocytomas, and metastatic melanomas. Carcinoembryonic antigen (CEA) may become elevated not only in recurrent large bowel cancers, but it may express the development of a new lesion such as lung cancer, in the same patient.

Finally, patients with in situ carcinomas can be followed every 6 months from the start. Despite their good prognosis, they may be excellent candidates for other new primaries.

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*E. GEORGE ELIAS* MD
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# Influenza Vaccine Efficacy in a Maryland Nursing Home

*MARY CURRIER MD, MPH; THELMA COFFMAN RN; PATRICIA BOYD RN; BARBARA FREMD; and EBENEZER ISRAEL MD, MPH*

**An outbreak of influenza A occurred in the residents of a Maryland nursing home between January 8 and January 26, 1988. Of 126 residents 54 fit the case definition for influenza. Five of ten viral throat cultures obtained were positive for influenza A/Leningrad-like (H3N2). Of the 126 residents 121 had known vaccination histories. Eighty-seven of the 121 (72 percent) had received the split trivalent vaccine in late September or early October 1987. Incidence of illness and complications were not significantly different in vaccinated and nonvaccinated residents.**

Elderly persons and those with chronic illnesses are at increased risk of serious complications and death from influenza A infection. The Immunization Practices Advisory Committee has recommended routine annual vaccination for nursing home residents. This is an environment where the individuals are at high risk and the infection is readily spread.[1] However, the efficacy of the vaccine in nursing home populations is not well documented. Previous studies have had varying results regarding vaccine efficacy in prevention of disease, complications, and death.[2-6] The usefulness of the vaccine changes from year to year depending largely on the closeness of the match between the antigens in the vaccine and the circulating influenza virus. We examined vaccine efficacy in the 1987-1988 influenza season in a Maryland intermediate and domiciliary care nursing home.

## Background

On January 21, 1988, an ongoing outbreak of influenzalike illness in a nursing home was reported to the Maryland Department of Health and Mental Hygiene. The facility has a capacity of 138 residents and was housing 126 at the time of the outbreak. The average age of the residents was 86 years, and 85 percent were female. The nursing home was divided into four units: Ward A, which housed 26 domiciliary care residents in private rooms; Ward B, which was a locked ward for 13 of the most senile residents; Ward C, which housed 39 of the more independent intermediate care residents; and Ward D, which housed 48 intermediate care residents.

## Methods

During the outbreak, throat cultures for influenza identification and acute sera were obtained from 10 residents who had developed symptoms within the previous 24 hours. After the conclusion of the outbreak the nursing home was again visited. All medical records were reviewed for the pertinent period. The case definition used was the presence of fever greater than 99.8°F orally, plus one or more of the following symptoms: cough, congestion, or sore throat; or having a positive viral throat culture. Possible cases were defined as either having no fever but having one of the other above symptoms, or fever but no other upper respiratory symptoms.

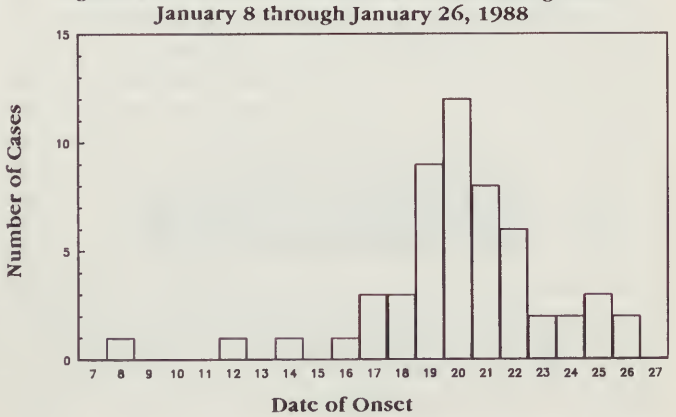
## Results

Influenza A/Leningrad-like (H3N2) was isolated from four of the eight cultures obtained from cases and from one of the two cultures obtained from possible cases. None of the four paired sera showed a fourfold increase in titer.

Fifty-four residents fit the case definition for influenza for an attack rate of 43 percent. Twenty-three residents were classified as possible cases. The peak frequency of cases occurred on January 20, with the onset of the first case on January 8, and the last on January 26 (see Figure). Five cases developed pneumonia that was confirmed by x-ray. Two residents died, one who had pneumonia and one who had not received an x-ray.

One hundred twenty-one residents had known vaccination histories, and 87 (72 percent) of these had received a 0.5 ml dose of split trivalent vaccine in late September or early October 1987. Each dose contained antigens to influenza A/Leningrad (H3N2), A/Taiwan

**Figure. An Outbreak of Influenza A In a Nursing Home January 8 through January 26, 1988**




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(H1N1) and B/Ann Arbor. Thirty-six of the 87 vaccinated residents were cases: an attack rate of 41 percent. Fifteen of the 34 nonvaccinated residents were cases: an attack rate of 44 percent. The attack rates of the vaccinated and nonvaccinated residents were not statistically significantly different (Yates corrected $X^2 = 0.0, p = 0.94$). The vaccine efficacy using our case definition was six percent. If possible cases were included in the case category, the vaccine efficacy becomes negative. The original strict case definition was used for the rest of the analysis.

One of the five pneumonia cases had not been vaccinated. The attack rate for pneumonia was not statistically different between vaccinated cases (11 percent) and nonvaccinated cases (7 percent) (Fisher exact test 2-tailed $p = 1.00$). There were two deaths, one was a patient who had been diagnosed with pneumonia and had been vaccinated. The duration of illness was not decreased in the vaccinated cases.

Characteristics of the vaccinated and nonvaccinated groups were examined. The mean age of both the vaccinated and the nonvaccinated residents was 87 years. The vaccinated group was 83 percent female, and the nonvaccinated group was 88 percent female (not statistically significantly different). Underlying serious medical conditions were compared. Only the diagnosis of senile dementia was found to be different between the two groups. The diagnosis was found more often in vaccinated residents (38 percent) than in nonvaccinated residents (9 percent). The relative risk of being vaccinated if the resident was senile was 1.44 (95 percent C.I.= 1.15, 1.81). The diagnosis of congestive heart failure (CHF) was found more frequently in cases (24 percent) than in noncases (8 percent) but was not found to be related to vaccination status. The relative risk of being a case if the resident had CHF was 1.79 (95 percent C.I. = 1.12, 2.85).

## Discussion

The findings from this nursing home indicate no association between vaccination status and disease incidence, incidence of complications (although the numbers are small), or duration of disease. The usefulness of the vaccine each year depends on the match between the antigens in the vaccine and those of the circulating influenza virus, therefore it is important to investigate influenza vaccine efficacy on a yearly basis. Our results may be due in part to the drift of the viral antigens from the predicted subtype. The influenza vaccine given in the fall of 1987 contained antigens to influenza A/Taiwan/1/86 (H1N1), A/Leningrad/360/86 (H3N2), and B/Ann Arbor/1/86, whereas the viral isolates found this year in the United States have been "A/Leningrad-like" (predominantly A/Sichuan (H3N2) and A/Victoria (H3N2)). The isolates from this nursing home were influenza A/Leningrad-like (H3N2) and were not subtyped, but there is little reason to believe they differ from the isolates found elsewhere in the U.S.

The diagnosis of senile dementia was found more often in the vaccinated than the nonvaccinated residents. This is thought to be due to the nursing home policy that requires oral consent from the resident for vaccination, but if the patient is not well enough oriented to give consent, he or she is vaccinated "by doctor's orders." The diagnosis of congestive heart failure (CHF) was found more frequently in cases than in noncases. It may be that influenza in CHF patients is more likely to be a severe illness with complications, or that CHF patients require more nursing care and are therefore more likely to be exposed to the virus.

The elderly may have a decreased immune response to killed vaccine.[7-10] This could partially account for the insignificant efficacy at preventing disease.

It is possible there was another concomitant upper respiratory illness in the facility. We found no laboratory evidence of this, and in five of the ten viral throat cultures influenza A was identified. The behavior of the outbreak was typical of an institutional influenza outbreak with rapid person-to-person spread and high attack rate.

A problem with retrospectively assessing vaccine efficacy is the accurate identification of influenza cases. Our case definition may have left out the less severe cases. If the vaccine did decrease the severity of illness, then one would expect these "possible cases" (that is, those with fever and no other documented symptoms, or those with no fever but one or more of cough, congestion, or sore throat) to have a higher rate of vaccination. The vaccination rate in the possible cases was 76 percent as compared to 71 percent of the cases and 71 percent of the noncases ($X^2 = 0.24$, $p = 0.88$). So although the vaccination rate was higher in the "possible cases" than in the cases or noncases, it was not significantly so. When the "possible cases" were included as cases in the calculation of vaccine efficacy the result was an even lower level of efficacy.

In summary, this study found no protective effects of influenza vaccination in a nursing home population. We could find no methodological explanation for this. More research is needed to further evaluate the role of influenza vaccine in nursing homes.

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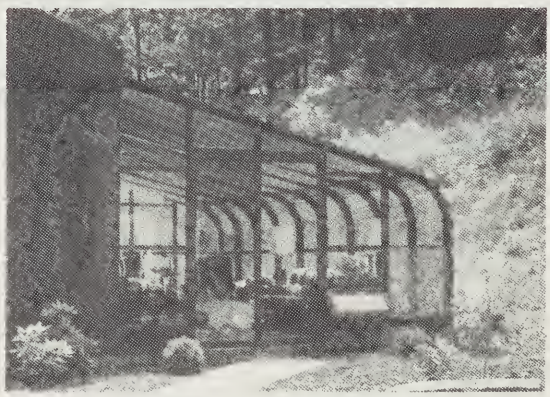
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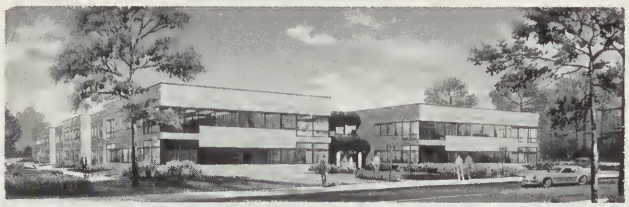
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# Fluid Replacement after Blood Donation: Implications for Elderly and Autologous Blood Donors

*ALI DANESHVAR MD, MAS*

**The first few hours after blood donation are critical because the immediate neuroregulatory reflexes are not capable of maintaining blood pressure at the value before loss and volume replacement has not taken place effectively. Temporary maintenance of blood volume by replacement of lost blood with a crystalloid solution will help bypass this period and provide greater cardiovascular stability as well as a subjective feeling of well-being. The procedure can be performed economically and may have significant impact on blood donors in general and elderly donors in particular.**

The older population of the United States is large and rapidly growing.[1] In July 1983, the United States for the first time reached a point where there are more Americans over 65 than teenagers.[2] As this population grows, concern about their transfusion needs and their ability to donate blood also is increasing.

The upper age limit for volunteer blood donors in the United States is 65 years[3]; however, older donors may be accepted, at the discretion of a blood bank physician. The age limit suggested by the European Council is 60 years for new donors and 65 years for repeat donors. Old age is not a constraint to autologous blood donation. Yet the age limits imposed on voluntary donation imply an undefined risk in blood donation by older patients, and in many situations the cardiovascular disorders common to the elderly may raise concern about the safety of phlebotomy. In our hospital, among 934 patients who have donated blood for their surgery, 20 percent were more than 65 years old.

One reason for the implied risk is the decrease in blood pressure that occurs immediately after blood loss, when the neuroregulatory reflexes are not capable of maintaining the blood pressure at the value before donation. Consequently, the burden of compensation on a compromised cardiovascular system may become harmful. Replacement of donated blood with an appropriate solution might help bypass the period of instability that follows blood donation and hence decrease the risk of blood donation for elderly patients or those patients with cardiovascular or other diseases that might otherwise compromise their eligibility for autologous transfusion.

This article evaluates the hypothesis and reviews the literature in support of the hypothesis that maintaining a relative normovolemia after blood donation will reduce or eliminate the risk of blood donation by high-risk patients.

## Methods

**Patient Population** The 63 subjects were surgical candidates with anticipated perioperative blood transfusion who were either "elderly" (age $\geq$ 65) or younger but with compromising cardiovascular history, for example, an gina pectoris, hypertension, or myocardial infarction. These were consecutive cases, except for exclusion of seven for whom the required information was incomplete. Nineteen volunteer blood donors were used as controls, and the same procedures were followed except for fluid replacement.

**Procedures** The patients were studied for changes of vital signs during and after phlebotomy of 470 ml of blood. Immediately after phlebotomy, 500 ml of crystalloid fluid consisting of either sterile normal saline solution or Ringer's lactate were infused. Systolic blood pressure, diastolic blood pressure, mean arterial pressure, and heart rate were measured by use of a Kendall™ Blood Pressure Monitor (The Kendall Company, Boston, MA) with numeric print of results. Measurements were recorded before donation while the patient was standing from a sitting position and about 15 minutes after replacement infusion while standing from a recumbent position. Vital signs during phlebotomy also were recorded, but for lack of major application they are not presented.

By use of a Double Plasmapheresis Blood-Pack® (Fenwall Laboratories, Deerfield, IL), room temperature replacement fluid was infused rapidly through the same phlebotomy needle, eliminating double stick. All phlebotomies were performed by an experienced donor-room registered nurse using sterile techniques. All donors were managed according to the AABB standards.[3] The procedure was found acceptable by the Food and Drug Administration and it also was approved through the expeditious review of the Hospital's Research Committee. Paired Student's t-test statistical computation was performed using an IBM computer.

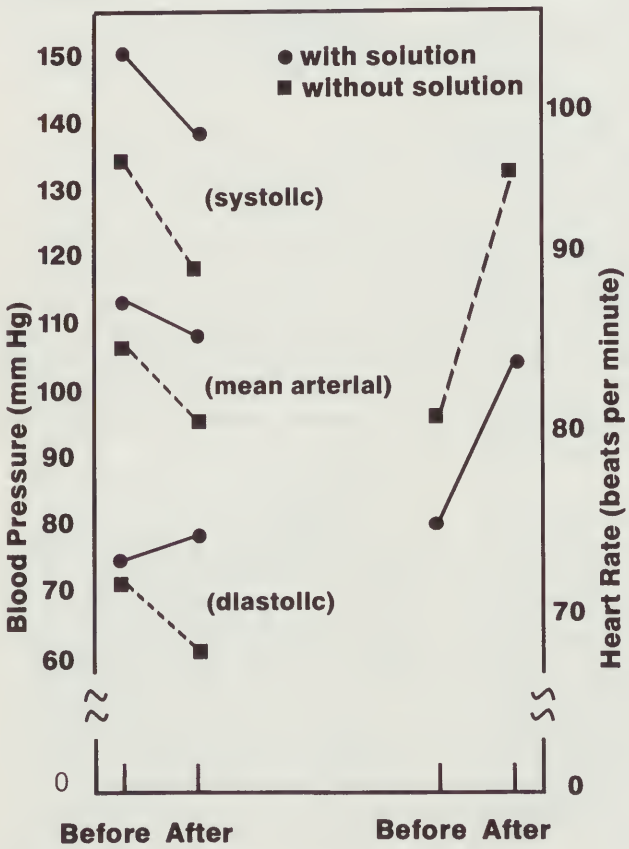
## Results

Sixty-three donors (mean age 72 years; range 41 to 87 years) were monitored for the effects of volume replacement after blood donation. Nineteen control subjects had a mean age of 55.8 years (range 26 to 73). Included in the control group was a 66-year-old who experienced mild dizziness and a 71-year-old who felt "funny," both upon standing. They were allowed to rest on the donor chair until their vital signs were stabilized. No other adverse effects were observed among the donors.

The mean recorded measurements are presented in the Figure. In the fluid replacement group, systolic blood

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pressure decreased from predonation level of 147.1 mm Hg to postdonation level of 139.9 mm Hg. Mean arterial pressure decreased from predonation level of 112.0 mm Hg to postdonation level of 109.8 mm Hg, and diastolic blood pressure increased from predonation level of 71.8 mm Hg to postdonation level of 73.5 mm Hg. The respective pre- and postdonation changes of blood pressure for the control group was systolic from 133.3 to 116.8 mm Hg, mean arterial pressure from 108.0 to 95.3 mm Hg, and diastolic from 70.6 to 60.8 mm Hg. Heart rate in the fluid replacement group increased from 76.3 to 83.6 beats per minute. Respective figures for the control group were 80.4 and 97.2 beats per minute. Comparison of the results show that the age-adjusted difference between systolic ($P = 0.0144$), mean arterial ($P = 0.0021$), and diastolic ($P = 0.0098$) blood pressures between subjects and controls are statistically significant. Although after donation the heart rate on average increased 16.7 beats per minute in control group compared with 7.3 in subjects, this difference was not statistically significant ($P = 0.0889$). Likewise, the incidence of two donor reactions in the control group was not statistically significant. Many repeat donors with previous experience of blood donation expressed their preference for receiving replacement.




## Discussion

The hemodynamic effects of blood donation differ from blood loss from other causes in that shortly after the episode the subject is expected to assume an erect position and leave the scene. Therefore, the effect of a phlebotomy is confounded by the effects of postural stress. As a result, for example, during a three-year period, 203 claims related to donor incidents due to fainting were received by Great American Insurance Midwest, Inc., with compensations ranging up to $70,000 per case.[4] The great majority of incidents occured after ambulation. The literature does not indicate any particular factor that makes the elderly more susceptible. We review individual implicated issues, although they are clearly interrelated.

**Physiological Effects of Blood Loss** After acute blood loss, cardiovascular integrity is maintained by a number of compensatory changes. Arterial blood pressure is regulated by a system of rapidly acting mechanisms that are concerned with immediate survival (baroreceptors and chemoreceptors) and a system for long-term control of the basic arterial pressure level that involves control of blood volume. Most short-term mechanisms for controlling pressure lose their capability after a few hours and cannot succeed in bringing the arterial pressure completely back to normal.[5]

After hemorrhage there is a sharp drop in plasma volume which, is not replaced immediately.[6] Rather, the plasma volume gradually increases until, at the end of three to four days, it is greater than the original plasma volume by an amount approximately equal to the volume of blood cells removed.[7]

The significant changes in heart rate, arterial blood pressure, and oxygen uptake after blood donation are the result of the response of the organism to hypovolemia and not to loss of hemoglobin.[8] Likewise, according to Wallace and Sharpey-Schafer, emotional causes of fall of blood pressure seem unlikely, and a sudden drop of blood volume appears to be the initiating mechamism of "shocked" casualties and blood donors.[9] Indeed, such relatively small changes in hemoglobin induce only minor or negligible changes in cardiopulmonary parameters.[10]

**Postural Effect** The ability to adapt to erect posture is widely used as a measure of cardiovascular competence.[11] The cardiovascular system of normal subjects in the upright posture appears to respond in a manner analogous to the supine patient with heart failure.[12] Blood donation causes an exaggerated response of systolic blood pressure to alteration in posture.[9] The critical defect in postural stress is an inadequate central blood volume, that is, the blood volume in the lungs, heart, and great veins of the thorax.[12] With erect posture, many

changes occur, including translocation of central blood volume, a widespread reflex vaso- and venoconstriction due to pressoreceptor activation, a reduction in cardiac reserve, and hyperventilation, all of which influence circulatory performance and the susceptibility to fainting.[11]

**Effect of Aging** The question of reasonable upper age limits for voluntary blood donation recently was presented to nine experts in an international forum. Six of the participants were in favor of an extension of the existing limit of 65 years and three were against.[13] The existing age limit is based on somewhat arbitrary observations related to the effects of senescence on the general population. The criteria for acceptability of autologous donors, on the other hand, are decidedly subjective. Ussing information from donor history and physical evaluation, the blood bank physician makes a judgment to accept or reject a particular donor.

Certain characteristics of elderly patients compromise their ability to compensate for the effects of sudden blood loss. These may be related to normal aging and include changes in the arterial wall that result in gradually increasing rigidity of vessels and reduced compliance.[14] It also is known that normal aging is associated with a progressive loss of cerebral vasomotor responsiveness and a decrease in cerebral blood flow.[15] The prevalence of many chronic diseases, which rises markedly after age 65, may also predispose patients toward difficulties. Moreover, multiple diseases often occur insidiously in the same individual.[16] Indeed, volunteer donors who are deferred permanently for medical reasons were found to be significantly older.[17]

Atherosclerosis is by far the leading cause of death in the United States and is a prevalent condition in the elderly. Moreover, factors such as myocardial infarction, valvular heart disease, hypertension, and cardiac anoxia that decrease the ability of the heart to pump blood are common among the elderly and can cause hypoeffectivity of cardiac compliance.[18]

Orthostatic hypotension, a profound and persistent decline in arterial pressure with assumption of the upright posture, is more prevalent in the elderly population for several reasons. For example, use of vasoactive drugs, including essentially all antihypertensive agents, is more common; disorders of the peripheral, autonomic, or central nervous system, including diabetes mellitus, alcoholism, pernicious anemia, and vascular lesions of the brain stem occur, as well as diseased or varicose veins. Cardiovascular deconditioning may result after any prolonged illness requiring lengthy recumbency. Further, reflex-mediated vasomotor instability may initiate syncope in syndromes such as carotid sinus hypersensitivity, arteriosclerosis, and hypertension, which usually occur in the elderly.[19]

Notwithstanding these facts, Sharpey-Schafer *et al.* have reported that during venesections of 300 to 2000 ml in more than 700 patients with heart failure there were no instances of fainting[20,21]; the authors suggested that the increased central blood volume and heightened venous pressure in such individuals are the factors that minimized the fainting tendency. Schmidt has recruited senior volunteers as blood donors with a lower deferral rate and lower rejection rate compared with national average.[22] Likewise, Pindyk *et al.* have shown that a group of elderly donors with a mean age of 69.2 had a reaction rate not different from the control group.[23] These data reveal the chronologic age limit of donors is arbitrarily assigned and the biologic age would be more pertinent.

## Conclusion

With recent public awareness of increasing frequency of AIDS and other transfusion-transmissible diseases, the nationwide demand for autologous blood is growing dramatically. This study was devised in an attempt to reduce the risks of autologous blood donation. Unlike volunteer donors, surgical candidates are more likely to be from a sick population. They face rather well- defined risks of receiving blood[24,25] and attempt to donate blood in order to avert such risks. From their point of view any lesser risk would be justified. Nonetheless, concerns about donor safety still remain, and decreasing these risks is essential.

The subjects of this study were patients who, based on current criteria, would have been rejected by the author as either borderline or not suitable for a safe donation. Crystalloid replacement stabilized the vital parameters of homeostasis to the extent that none of the patients developed any adverse effects after donation. Not necessarily by design, all patients were seen by their physician within a reasonable time interval before and after the donation. No adverse effect was reported by any physician, although admittedly this is a subjective criterion.

The procedure can be performed at a cost of less than $2. The use of a plasmapheresis bag, which originally was used to avoid additional venepuncture, is superfluous. The same procedure can be performed with use of a three-way stopcock as described by Baughan and Patterson,[26] or using sterile connecting devices (Haemonetics Corporation, Braintree, MA). This cost is considerably less than the cost of tests to detect transmissible diseases on a unit of homologous donor blood (estimated to be $14 to $20). Eventually an alteration of the donor bag by connecting the fluid container to the donor set may make the procedure simpler and more economical.

Volume-by-volume replacement of lost blood with non-iso-oncotic fluid does not provide a stable nor-

movolemia.[27] An optimal state can be achieved by either infusion of approximately twice the volume of lost blood with crystalloid solution or the same volume with colloid solution.[28] For the range of blood loss during blood donation, a partial or temporary isovolemic condition produced by using crystalloid fluid is considered adequate. Side effects of hypervolemia with a large volume of crystalloid and the higher cost of other plasma expanders with their rare complications are avoided.

Another reason for the efficiency of volume replacement is the effect of hemodilution. Lower hematocrit in the range induced by blood donation with normal blood volume will increase organ blood flow through improved rheology.

## Application to Other Blood Donors

Although this procedure was designed to support autologous blood donation, and its scope is somewhat limited in regard to donor response, the beneficial effects of volume replacement seem clear and can be extended to volunteer blood donors.

According to Graham, except for those with very slow rates, the higher the pulse rate, the more likely is the donor to faint.[29] He did not find any correlation between systolic, diastolic, or pulse pressure and the subsequent occurrence of fainting. According to Ruetz *et al.*, the best quantitative measure of the reaction tendency probably is the maximum fall in mean arterial blood pressure.[11] Ogata *et al.* have shown that donors with lower diastolic pressure are more prone to develop reaction, even if the volume of donated blood in their experiment was restricted to 200 ml.[30] These potential risks can be eliminated by volume replacement: for elderly volunteer donors, volume replacement decreases the potential risk to an acceptable level; for physically active blood donors, it will maintain their exercise capacity by sustaining the cardiac compensatory reserve; for other regular blood donors, it will eliminate weakness and lightheadedness, and other potentially distressing aspects of blood donation that are among the reasons for donor deferral or lack of motivation for blood donation;[31] and for first-time donors, it eliminates the perceived dangers of blood donation and anxiety, which are an important antecedent of syncope.[32]

## Acknowledgment

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# Ruth Workman Baldwin MD: 35 Years with the MAB

**Dr. Baldwin, a Baltimore pediatrician, retired as Chairman of the Medical Advisory Board (MAB) to the Maryland Department of Transportation's Motor Vehicle Administration in 1987, where she had served since 1952. Over 35 years, Dr. Baldwin served under eight MVA Commissioners. On the occasion of her retirement celebration on January 19, 1988, one of *MMJ*'s Editorial Board members interviewed Dr. Baldwin about her career with the Board.**

In 1952, I told one of my patients to turn in his driver's license because he had too many seizures. He was requested to appear before the Medical Advisory Board which, at that time, was meeting in a small room in the old Department of Motor Vehicles in Baltimore City. I attended the meeting with him to explain his problem, and the next week I was invited to join the group. They were the four charter members who had been asked to serve after the Maryland Legislature passed a law in 1946 creating the Medical Advisory Board.

One of the first questions that came to us was "Is alcohol a disease, and should we be seeing alcoholics?" Dr. Turke talked to our group and convinced us that alcoholism was a disease and that we should be seeing alcoholics. Our next big problem was to devise a chemical test and to decide on the critical level of alcohol in a person's system that would indicate he or she should be seen by a physician.

Similar tests for other diseases were created, leading to discussions about which diseases the Board should be monitoring and what controls we should have.

Over the years as we receive more reliable information, we definitely are making progress in addressing and solving the major health concerns relating to drivers' competence. For example, we have seen restrictions for epileptic drivers decrease from three years to two years, then to one year and now down to three months free of seizures before being allowed to drive. Today the major issue the Medical Advisory Board faces is how to interpret the reports we get from physicians, families, neighbors, and others.

### Practitioners' Contributions

A total of 60 physicians contribute to the Medical Advisory Board's function. We try to have a psychiatrist (preferaby specializing in alcohol treatment), an internist, a neurologist, and an orthopedic surgeon whenever possible.

There are ways in which practicing physicians could be of greater assistance to the MAB, such as issuing timely completions of medical status reports on their patients. Fortunately, most physicians are very prompt about getting required reports to the Department of Motor Vehicles. Practitioners can help the Board do a better job by reporting patients they know would be a danger on the highway.

Some physicians decline to cooperate; they complained when we had a mandatory reporting law, believing they would lose patients. That, however, depends on how they advised their patients. I never lost patients even though I continued to report them, because I always told them that I was trying to prevent any harm to them. All my patients accepted that rationale.

Practicing physicians are no longer required by law to report any medical conditions to the DMV. When a law requiring such a report was enacted several years ago practitioners complained, and the Legislature eliminated it after one year. Physicians are not civily liable to the patient for reporting a condition, but a lawyer may challenge the medical board's decision in court.

### Maryland vs. Other States

Maryland's Medical Advisory Board is viewed by other states as a model board. It is an ideal. Other states lack unity in that they have only a few physicians to whom they send reports without first seeing the applicant.

Since Maryland has no definite set of laws regulating drivers with medical problems, the Board can vary the way we handle each case. The type of cases we face most often are alcoholics: nine of ten cases involve alcoholism. The Board has a very definite role regarding the alcoholic patient. If an alcoholic patient has been arrested and found guilty of driving either under the influence of alcohol or drugs (or intoxicated with them), after the court hearing he or she must see the MAB and then undergo an investigation. If the patient has stopped drinking and is going to an AA program, a psychiatrist, or psychologist and receives a good report, he/she may be approved for driving with one or two restrictions such as "can drive to work, school, alcoholic anonymous meeting, or a doctor." If the patient has not stopped drinking, he or she is restricted, depending on the degree of alcoholism, until six months to a year has passed without any comsumption of alcoholic beverages.

Under a #8 restriction, the patient must go to AA, a psychiatrist, or a psychologist one to seven times a week and/or to a drinking-driver monitor program. A #9 restriction results in a flag on the driver's license that would alert an arresting officer that the driver has has a previous problem with alcohol. If a person consumes alcohol and drives with a #9 restricted license, he/she is in direct violation of the permit, which can be revoked on the spot.

For many years approximately nine of ten MAB patient referrals have been for alcohol problems, and the rest have been referred for other medical conditions such as epilepsy, senility, cardiovascular disease, diabetes, problems with vision, and musculoskeletal incoordination from disease or injury.

Dr. Baldwin said her retirement plans include "sitting on her usual boards," but she will not be spending time on setting up new programs.

A 1943 graduate of the University of Maryland School of Medicine, Dr. Baldwin recently donated more than $80,000 to establish the Dr. Ruth W. Baldwin Visiting Professorship in the Department of Pediatrics at her alma mater. The Visiting Professorship will be held by an individual who is widely recognized for his/her achievements and contributions to the medical discipline of pediatrics. The major portion of the available income from the Endowment will be applied to an Honorarium for the Baldwin Visiting Professorship and the expenses incurred with his/her visit. There will be at least one Baldwin Visiting Professor for no less than two consecutive days to meet with faculty and students. The formal presentation made during that visit will be known as the Dr. Ruth W. Baldwin Lecture.

As this is the first Visiting Professorship that has been established for the Department of Pediatrics, Dr. Baldwin's generosity in providing an endowment for this purpose will be of benefit to present students and faculty, as well as those who are to follow in Dr. Baldwin's footsteps.

After attending the Lewis Institute from 1936-1938, Dr. Baldwin received a BS degree from the University of Maryland in 1942, and the MD in 1943. She was an intern, assistant resident, then resident in medicine in West



*Dr. Ruth Baldwin receiving from Marshall Rickert a framed Proclamation from Governor Schaefer on behalf of the citizens of Maryland expressing gratitude and great respect for her many years of devoted service on the Medical Advisory Board to the Maryland Department of Transportation's Motor Vehicle Administration.*



*At the retirement banquet (from left) Agnes Stoicos, Chief Deputy Administrator; Marshall Rickert, Administrator; Dr. Ruth Baldwin; and Ejner J. Johnson and William T. S. Bricker, former Motor Vehicle Administration administrators.*

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Baltimore General Hospital from 1942-1946; a Fellow in neurology at Boston's Children's Hospital, 1949; and had a private practice in Catonsville, MD in 1950-1952. Dr. Baldwin was assistant professor of pediatrics and director of the seizure unit at the University of Maryland School of Medicine from 1950-1964; associate professor of pediatrics, 1964-1976; and professor, 1976-1984.

Some of the many organizations Dr. Baldwin has been affiliated with are the Maryland Council on Developmental Disabilities, serving as chairman in 1971-1972; member of the advisory board of the Association of Mentally Handicapped Children in Maryland; Maryland Eastern Shore Epilepsy Association; Chesapeake Association for Epilepsy, Association for Children with Specific Learning Disabilities; Chairman for the Executive Coalition for Handicapped; American League Against Epilepsy, National Rehabilitation Association; and the American Medical Women's Association.

Dr. Baldwin was a co-discoverer of aminoaciduria in one of the cerebromacular degenerations. For 40 years she has focused on the health and welfare of children, especially those who have central nervous system disabilities (developmental disabilities).

A resident of Relay, MD, over the years Dr. Baldwin has been concerned about family life, treating others the way she wished to be treated, running a home, and raising a family of four sons to be understanding, kind, and productive.


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# Driving and Epilepsy

*ROBERT S. FISHER MD and ALLAN KRUMHOLZ MD*

**Individuals with a history of epileptic seizures have a slightly higher-than-average risk for traffic accidents. The increase in risk is believed to be relatively small when seizures are well controlled, but there is considerable variation in the definition of "well controlled." Maryland uses a three-month seizure-free interval as an index. Certain seizures may not disqualify individuals from driving, but it is the physician's responsibility to advise the seizure patient. There is precedent for reporting to state authorities if the physician thinks public safety is endangered. Further study is needed to improve ability to predict recurrence of seizures, to consider special cases of individuals driving for long periods (for example, commercial driving), and to balance against the public welfare an individual's right to lead a productive life in our driving-oriented society.**

On July 1, 1985 the State of Maryland altered its laws and regulations regarding driving and epilepsy. Previous regulations[1] stipulated

> if an individual has not had an episode of altered consciousness for the preceding three years, he may be considered for any class of license. If an individual has not had an episode of altered consciousness in the preceding year, he may be considered for a class D or E license only.

A class D license is a standard individual driver's license and E is a license to drive motorcycles. By this regulation individuals who have suffered an alteration in consciousness (such as a generalized seizure) cannot drive a car unless special extenuating circumstances, such as adequacy of warning, occurrence only during sleep, or occurrence because of a physician-advised anticonvulsant reduction, were accepted by the Medical Advisory Board of the Motor Vehicles Administration. House of Delegates Bill 913 repealed and reenacted section 16-20 (a) (2) of the Transportation Article of the Annotated Code of Maryland, and amended section 16-208 (a) of the same Article. Amended text of the law now reads

> If the Administration suspends or revokes a license of an individual based on a showing by the Administration's records or other sufficient evidence that the individual's driving may be adversely affected by the individual's epilepsy, the period of suspension or revocation may not exceed 90 days unless the individual experiences a seizure within 90 days after the period of suspension or revocation begins.

Similar wording is applied to issuance and renewal of a driver's license. This change in the law reduced the "seizure-free" interval from one year to three months.

It is the responsibility of the person with epilepsy or seizures to notify the Motor Vehicles Administration (MVA) of any seizures. The MVA may receive information from family, friends, public, or medical authorities with respect to an individual's ability to safely operate a motor vehicle. When such information is received by the MVA they schedule an interview with the driving individual in a few weeks. He or she is advised to bring a medical report (form DC-36) completed by his or her physician, and an affidavit (DC-49) filled out by the client.

Based on the outcome of the interview and the Board's recommendations, one of several actions may occur. Additional information may be requested. The MVA may approve driving privileges with requirements for a medical report and an affidavit every three months for one year. License may be suspended for an indefinite period because of coexisting conditions to the seizures (for example, ongoing substance abuse).

In the event of suspension or refusal to issue a license because of recent seizures, the client must furnish the Medical Advisory Board of the MVA with a completed affidavit and medical report form one week prior to end of a suspension. The suspension for recent seizures is 90 days, commencing at the time the license is suspended or refused. If the individual complies and no further seizures are indicated, the license will be returned with a letter stating the suspension has been rescinded. Medical reports and affidavits will then be required for three additional three-month periods. If further seizures are indicated in the report, ongoing suspension would be enacted.

It is noteworthy that the change in the legislation applied specifically to alteration of consciousness due to seizures. Alteration from other causes, such as syncope, hypoglycemic coma, and psychogenic loss of consciousness, are still governed by previous regulations generally requiring one year suspension of driving privileges.

Regulations for interstate driving are governed by federal Department of Transportation regulations. Commercial classes of license, including A, B, and C, previously required a minimum of three years without alteration of consciousness; current policies for commercial driving licenses (including school vehicle drivers) are under review. The National Transportation Safety Board (Washington, DC 20594, "H-86-50") recently recommended that "no patient having epilepsy or narcolepsy should be considered to be medically qualified in Class I or Class II categories," unless seizure free for ten years. Class I and II drivers are defined by the American Medical Association[2] as operators of buses, limousines,

The authors are Associate Professors of Neurology, The Johns Hopkins University School of Medicine, Baltimore. Dr. Krumholz is Chief of Neurology, Sinai Hospital of Baltimore.

**Table. Driving and Epilepsy**

| State | Seizure-Free Period | State | Seizure-Free Period |
|---|---|---|---|
| Alabama | 1 year | Montana | 6 months |
| Alaska | 6 months | Nebraska | 1 year |
| Arizona | 2 years without medication, 1 year with medication | Nevada | 3 months |
| | | New Hampshire | 1 year |
| Arkansas | 1 year | New Jersey | 1 year, less on recommendation of Committee |
| California | No specific time | | |
| Colorado | No specific time | New Mexico | 1 year |
| Connecticut | 3 months, or less with MVA approval | New York | 1 year. Less with doctor's approval |
| Delaware | No specific time | North Carolina | No specific time |
| District of Columbia | 1 year, or less if continued medication, or if nocturnal | North Dakota | 6 months |
| | | Ohio | No specific time |
| Florida | 1 year | Oklahoma | 1 year |
| Georgia | 1 year | Oregon | No specific time |
| Hawaii | 1 year | Pennsylvania | 1 year. Less if nocturnal or auras only |
| Idaho | 1 year, or 6 months upon doctor approval | | |
| | | Puerto Rico | No specific time |
| Illinois | No specific time | Rhode Island | No specific time |
| Indiana | No specific time | South Carolina | 6 months |
| Iowa | 6 months. Less if Nocturnal seizures | South Dakota | 18 months. Less with doctor's approval |
| Kansas | 1 year | Tennessee | No specific time |
| Kentucky | 3 months | Texas | 1 year |
| Louisiana | 1 year | Utah | 3 months |
| Maine | 1 year or 6 months with doctor recommendation | Vermont | 24 months or 6 months with doctor's approval |
| Maryland | 3 months | | |
| Massachusetts | 6 months | Virgin Islands | No specific time |
| Michigan | 6 months. Less with doctor's approval. | Virginia | 1 year |
| | | Washington | 6 months |
| Minnesota | 1 year | West Virginia | 1 year |
| Mississippi | 1 year | Wisconsin | 6 months |
| Missouri | No specific time | Wyoming | 1 year |

Adapted with permission from the Epilepsy Foundation of America

ambulances, fire engines, rescue vehicles, articulated trucks, trucks transporting hazardous materials (fuel, chemicals, explosives, radioactive materials), taxicabs, trucks weighing more than 24,000 pounds and vehicles towing trailers.

## Background

Driving is a privilege and for some, a necessity. A balance must be struck between protecting the public safety and protecting the rights of individuals with epilepsy. Every state in the United States has regulations pertaining to driving and epilepsy. The Epilepsy Foundation of America compiled a summary, current to January 1986, of state regulations (see Table). Two states require a seizure-free interval of at least two years, one of 18 months, 23 of one year, 9 of six months, 5 of three months. Thirteen states list no specific time, usually requiring statements from physicians or advisory boards as to whether an individual with a prior seizure should drive. This wide variance in seizure-free periods required by differing states reflects lack of good data about driving and epilepsy.

Several different assumptions underlie existing regulations. At one extreme is the notion that people with a history of even one seizure should never drive. This was a recommendation by Thalwitzer[3] in 1906. In the 1940s certain authors advocated that individuals who are free from seizures after a long interval of time should be permitted to drive. The actual intervals and the necessity of being off anticonvulsant medications was a subject of some dispute. Trends in the 1960s and 1970s have been toward shorter periods of seizure-free minimum requirements, allowance of continuation of anticonvulsant medication, and individualization of consideration by review boards and referring physicians.

## Risk for Traffic Accidents

There is no question that fatal accidents may occur during epileptic seizures.[4] Certain studies of patients attending epilepsy clinics have uncovered strong relationships between seizures (especially complex partial seizures) and auto accidents,[5] however, these are self-selected individuals, not representative of the general population of people with epilepsy. Nevertheless, the risk for such an occurrence is small. One study performed on traffic records of the Netherlands[6] indicated traffic accident rate pf 1/10,000 caused by a seizure at the wheel. This compares to 6/10,000 accidents caused by natural death at the wheel[7] and 5,000/10,000 traffic deaths caused by alcohol.[8] Further perspective on this statistic may be gained by recognizing that the accident rate for women with epilepsy is lower than that for men without epilepsy.[9] Although the risk for accidents

caused by seizures is small, it has been estimated that the accident rate of people with epilepsy is approximately twice that of the population at large.[10]

It is difficult to know how many accidents occur to people with epilepsy because of seizure versus other factors. Many minor traffic accidents may go unreported, and people with epilepsy may have accidents secondary to subtle or manifest medication toxicity with impaired reflexes or judgment, to underlying neurologic disease, or to ordinary causes for traffic accidents. It has been estimated that only 1 in 5 accidents involving a driver with epilepsy can be attributed definitely to a seizure.[11]

Harsh legal restrictions on driving by individuals with seizures may not reduce accident risk. Countries with very strict limitations against driving with epilepsy report particularly frequent and severe traffic accidents related to epilepsy.[5] The inability of strict regulations to reduce accident risk may be due to noncompliance with legal limitations. In fact, most individuals with seizures who drive never reveal their disorder to authorities, despite specific requirements for reporting seizures.[12] Noncompliance with existing regulations may be directly linked to the severity of restrictions and limitations imposed on the individual. Less severe but still sensible restrictions actually might reduce the risk of traffic accidents related to seizures by promoting compliance with existing legal driving limitations.

### Risks for Seizure Recurrence

Decisions about driving and epilepsy require a risk-benefit analysis. Several factors play into the analysis: the risk for recurrence of the seizure, the nature of the seizure, presence or absence of warning, and time spent at the wheel. No method exists to predict with any degree of certainty whether a seizure will recur. So far, the best predictor appears to be seizure frequency over a recent interval of time.

Annegers and associates[13] followed 450 patients who have been seizure free for at least five years, for an interval of 10 to 20 subsequent years. Treatment varied from patient to patient. In general, 30 percent reported at least one seizure within the most recent five years of the follow-up. Relapse rates were 35 percent for those suffering from complex partial epilepsy (temporal lobe), 20 percent for those with generalized absence (petit mal), and 15 percent in those with generalized tonic-clonic (grand mal) seizures.

After a first unprovoked seizure, the risk of a second seizure within three years is approximately 30 percent.[14] Recurrent seizures may occur with patients on or off medication, although it is common belief (difficult to document) that anticonvulsant medication lowers the risk of seizure recurrence.

After several years of being seizure free, it is common practice for some physicians to taper medications. In this instance there may be as much as a 40 percent risk of relapse within five years of tapering.[15] Ingenious schemes have been suggested[16] based on the above factors; however, regulatory agencies require simply applicable rules. Seizure free interval therefore remains the most useful yardstick.

It would be helpful to know how well a short seizure-free interval predicts a longer seizure-free interval. One study[17] indicated that three months was a relatively good predictor for a one-year, seizure-free period, in that 85 percent of a sample of 73 patients in a seizure clinic who were seizure free for three months remained seizure free for the subsequent year. Those who remain seizure free for one year continued, 75 percent of the time, to be seizure free for three further years. A longer observation period is better than a shorter observation period for predictive purposes, but the information gained by longer periods only marginally improves prediction over shorter periods, and there is no clear cut-off in time for observation: the curve of "predictability" versus observation time appears to be continuous.

Arrayed against the risk for an accident at the wheel are the needs of the individuals who have had seizures. Approximately 5 percent of US population has had a seizure sometime in their life, and approximately 1 percent have the condition of spontaneously recurrent seizures referred to as epilepsy.[18] A vast majority of these individuals are fully productive members of society, whose livelihood and quality of life would be seriously impaired by loss of driving privileges for an extended interval. A three-month driving suspension may allow arrangements to be made to be transported to work. Such arrangements lasting one year may be difficult. A three-month time of medication adjustment and observation after a seizure is furthermore sufficient to establish that an individual is not having frequent, recurrent seizures. It is no guarantee that seizures will not occur at sometime in the future. Risks and benefits must be balanced.

### Mitigating Factors

Certain seizures give warnings (auras). If these auras are consistent and sufficient to allow a driver time to pull off the road, then the MVA may grant a license to such a person. Similarly, seizures that occur only during sleep or on immediate awakening from sleep may not interfere with driving ability. Exceptions also exist for individuals who have a seizure during anticonvulsant tapering, such that regulations (11.17.03.04, paragraph D 2c) contain the phrase "unless the alteration of consciousness was the result of a recommendation of a physician to discontinue the use of medication because of other medical or

surgical considerations." In the latter instance, reinstatement of medication and achievement of therapeutic blood levels may suffice to continue driving privileges.

It must be noted that the interval of anticonvulsant tapering, whether under medical supervision or not, is believed to be an especially high-risk time. No specific regulations or laws address the question of driving during an attempted medication taper. Physicians should be particularly careful to individualize advice on driving during such a period of medication change. Individuals who believe they have exceptional seizures, which do not impair their ability to drive, may make application for a review by the Medical Advisory Board of the MVA, which each year reviews several hundreds of cases concerning epilepsy and driving.[19]

If the MVA adopts a Medical Advisory Board recommendation that adversely affects an individual's driving privilege, that person has a right to request an administrative hearing. If the hearing results in an unfavorable decision, the involved party may appeal to the circuit court for the county in which he or she resides.

## Reporting Requirements

In Maryland it is the responsibility of the individual with seizures to report the condition to the Motor Vehicle Administration. Reports are required at the time of obtaining a driver's license or upon renewal every four years. Additional notification may be filed in the interim by the individual with seizures or anyone in the community. Physicians may have input into the MVA decision; however, in reality, physicians generally do not observe seizures and only report information provided by the patient. It has been found over the years that obligatory reporting by physicians compels many patients to lie to their doctors and hinders their medical care. Most states, including Maryland, therefore do not require physicians to report seizures to the state authorities. If physicians believe an issue of public safety is involved, this may supersede the confidentiality of the doctor-patient relationship.[8] Physicians do not grant or suspend driving privileges: that is the sole prerogative of the state. In all instances, however, the physician should give the patient and his or her family the best medical advice, inform the patient of issues and laws regarding driving and epilepsy, and document such a discussion in the medical record.


## Acknowledgments

We acknowledge helpful comments from Mrs. Victoria D. Whitlock, Director, Maryland Department of Transportation, Motor Vehicle Adminstration, and from the Professional Advisory Board of the Epilepsy Association of Maryland.


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**In the Matter of**
**Nicholas Michael Azzato MD**
**Before the**
**Commission on Medical Discipline**

**Findings of Fact,**
**Conclusions of Law, and Order**
**Procedural History**

1. Pursuant to information coming to the attention of the Maryland Commission on Medical Discipline (the "Commission") late in April of 1987, in May of 1987 the Commission commenced an investigation of Nicholas Michael Azzato MD ("Respondent"), a licensed physician in Maryland.

2. By a letter dated December 18, 1987 and received December 21, 1987, the Commission charged that Respondent had engaged in conduct for which he was subject to disciplinary action under Maryland Health Occupations Code Ann. 14-504(2), (3), (6) and (9).

3. By a Order for Emergency Suspension of License dated December 18, 1987 and received December 21, 1987, the Commission summarily suspended Respondent's license to practice medicine in this state, pursuant to Maryland State Government Code 10-405(b).

4. Counsel to Respondent, Courtland Townsend, Esquire, and the administrative prosecutor, Robert Roth, Assistant Attorney General, negotiated a proposed consent order in this matter, which was rejected by the Commission on February 2, 1988.

5. On April 5, 1988, the Commission held a hearing on both continuation of the summary suspension and the pending charges in this case.

**Findings of Fact**

6. The facts set forth in the Procedural History of this case before the Commission are incorporated herein as if set forth in full.

7. At all times relevant to this case, except following his summary suspension, Respondent has been a licensed physician and practitioner in this State.

8. Respondent is a Board certified specialist in plastic surgery.

9. Respondent, who is 63 years old, has not previously been subjected to discipline by the Commission, nor by any hospital at which he had privileges.

10. For approximately 20 years prior to April 1987, Respondent had been a regular user of marijuana.

11. Several years ago (the date is not further specified in the record), Respondent was introduced to cocaine in a social situation. After noting that he had pharmaceutical cocaine in his office, to be used in nasal surgery, he began to use it for personal use.

12. A couple of years later (again, no further date is available), Ms. A[1] became a patient of Respondent. He performed corrective nasal surgery on her on January 21, 1986 and the two became friends.

13. Shortly after Respondent had a coronary episode in February of 1986, Respondent and Ms. A began to share cocaine and, at some point, progressed from inhaling to injecting cocaine supplied by Respondent through his office.

14. On March 29, 1987, Respondent personally obtained 15 tablets of Valium 5 mg (Diazapan) at a People's Drug store in Bethesda, Maryland upon presentation of a fictitious prescription for a patient identified in the record as "B" [2] The purpose of this prescription was to help A "come down" from cocaine. It was written for patient B to avoid detection by A's husband.

15. On April 2 or 3, 1987, Respondent overdosed on drugs and was transported unconscious to George Washington University Hospital. He became a patient of psychiatrist Joseph Jurand MD, who began a program of rehabilitation that included psychotherapy, Narcotics Anonymous, and abstinence from drugs.

16. On April 21, 1987, Respondent was arrested on charges of distribution of controlled dangerous substances (CDS) (Code, Art. 27, 286) and obtaining CDS by fraud, deceit, misrepresentation or subterfuge (Code, Art. 27, 287). The drugs involved were Valium and Seconal Sodium.

17. Respondent gave a statement to the Montgomery County Police admitting that he probably committed the crimes alleged, though he could not recall details, owing to his use of drugs, specifically cocaine.

18. On November 19, 1987, Dr. Azzato entered a plea of guilty to two counts (1 and 3) of an eight count indictment. Both counts alleged illegal distribution of CDS, specifically Valium. The prosecution nolle prossed the remaining charges.

19. At the continuation of Respondent's sentencing hearing in the Circuit Court for Montgomery County, on February 2, 1988, Dr. Azzato was sentenced on Count 1 to 12 months at the Detention Center, all but 4 months suspended, the 4 months to be served at the Montgomery County Pre-Released Center on a Weekend turnaround basis. The Court, per Judge Mitchell, also imposed a term of 2 years supervised probation, during which time he is to submit to such counseling as is deemed necessary by the Department of Parole and Probation. As to Count 3, the Court imposed a two year suspended sentence, with an additional two years supervised probation, to run consecutive to the probation in Count 1.

20. As of the April 5, 1988 hearing on this matter, Respondent had been free of drugs for one year, as verified by ongoing random urine tests, and stated his in-

*On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.*

1. Although patient A's name appears on the public record of related proceedings stemming from these incidents, the Commission prefers to withhold patient names from public record. The name is kept elsewhere in the confidential file.

2. This patient's name has been withheld from the record to protect her privacy.

tention to remain so. The Commission has no reason to believe that Respondent, who is still serving his sentence at the Pre-Release Center, is not still drug-free to date.

21. The Commission has reviewed correspondence from Respondent's Narcotics Anonymous sponsor, Don Volk, attesting to Respondent's serious and involved approach to his recover.

22. Leonard Dietz MD, an acquaintance and colleague of Dr. Azzato, wrote a letter dated January 19, 1988 noting Respondent's exemplary conduct as a physician and surgeon. He wrote that during a major surgery jointly performed at Holy Cross Hospital on June 29, 1987, "Dr. Azzato's performance, technique and judgment with that patient revealed all to be excellent and without question of propriety both in the operating room and on the post-operative care rendered."

23. There is no direct evidence on the record that Respondent's drug abuse resulted in deficient medical care, although Respondent acknowledged before this Commission the tendency of such drugs to impair one's ability and judgment.

24. Joseph Jurand MD, made a favorable report with respect to Dr. Azzato by a letter of November 12, 1987.

25. Joseph Chambers MD, who had stopped formal care of Respondent in August of 1987, also reported favorably on his progress in a letter of January 4, 1988.

26. In a letter of January 22, 1988, Edward Kitlowski MD, Chairman of the Commission on Physician Rehabilitation, noted the forementioned positive comments of Dr. Jurand and Dr. Chambers and said that Respondent had complied with the requests of the Committee.

### Conclusions of Law

Based on the foregoing Finds of Fact, the Commission concludes that Dr. Azzato's conduct subjects him to discipline under Maryland Health Occupations Code Ann. 14-504(2), (3), (6) and (9), which respectively permit the Commission to impose sanctions on any licensee who:

> (2) Fraudulently or deceptively uses a license.
>
> (3) Is guilty of immoral conduct in the practice of medicine.
>
> (6) Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction set aside.
>
> (9) Is addicted to or habitually uses narcotics or controlled dangerous substances as defined in Article 27 of the Code.

### Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 21st day of June 1988, by majority vote of a quorum of the members of the Commission on Medical Discipline, hereby

ORDERED that the license of Respondent Nicholas M. Azzato MD, an individual licensed to practice medicine in the State of Maryland, is hereby SUSPENDED for a period of three (3) years beginning on December 21, 1987, the date he was served with an Order for Emergency Suspension of License; and be it further

ORDERED that all but the first year of the suspension shall be STAYED, whereupon, for the remaining two years, Respondent shall be on PROBATION, subject to the following terms and conditions:

1. Respondent shall participate in:
   a. Group therapy at a group therapy program approved by the Commission, at least one session per week;
   b. Individual therapy at an individual therapy program approved by the Commission, for at least one session per week, with the health professional providing the individual therapy to issue a report of Respondent's progress to the Commission every six months, the first report to be issued one month after the date of this Order; and
   c. Narcotics Anonymous for at least six sessions per week with no more than one session per day to be counted for the purposed of this Order;
2. That Respondent shall have a urinalysis done randomly, supervised, and at least once per week in a program approved by the Commission with copies of the results provided to the Commission;
3. Respondent's license to practice medicine shall be restricted in that Respondent may not prescribe cocaine in any form and may not have any cocaine in his possession or in his office;
4. Respondent's practice shall be subject to a Drug Audit at Respondent's expense every three months with the results to be sent to the Commission, which must find the results acceptable, the first Audit to be made one month after the date of this Order;
5. Respondent may not possess, dispense, or use any controlled dangerous substances, unless medically necessary for treatment of patients or prescribed for Respondent by another medical practitioner;
6. Respondent shall continue meeting the terms of his agreement with the Committee on Physical Rehabilitation, as set forth in a letter dated July 17, 1987 by Edward Kitlowski MD, and as may be varied by the Committee from time to time, until he completely fulfills the agreement and is discharged by the Committee. See State-Respondent's Joint Exhibit 1 at the April 5, 1988 hearing;
7. Respondent shall not violate any other provisions of the Act; and
8. Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after the expiration of three (3) years from the date this suspension began to run, the Commission will entertain a petition for altering or eliminating the terms of Respondent's probationary status upon Respondent's demonstrating to the satisfaction of the

Commission that he has complied with the terms and condition of his probation. If the Commission determined that he has not complied with the terms and conditions of his probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay on the suspension may be lifted and the Commision, after notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

*HILARY T. O'HERLIHY* MD, Chairman
Commission on Medical Discipline

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**In the Matter of**
**Thomas Nelson Carter MD**
**Before the**
**Commission on Medical Discipline**

**Findings of Fact,**
**Conclusions of Law, and Order**

**Preliminary Statement**

The Maryland Commission on Medical Discipline (the "Commission"),[1] on February 6, 1986, ordered the suspension of the license to practice medicine of Thomas N. Carter MD (the "Respondent") on an emergency basis. The emergency action of the Commission was taken pursuant to State Government Article 10-405, *Annotated Code of Maryland* (the Administrative Procedure Act) because in light of Respondent's professional incompetence in prescribing controlled dangerous substances, his continued possession of a license to practice medicine posed an imminent and grave danger to public health, welfare and safety as is more fully set forth in the Order for Emergency Suspension of License.

On February 25, 1986, the Commission issued a charge letter charging Respondent with violations of 14-504(2), (3), and (4) of the Maryland Medical Practice Act, Health Occupations Article, *Annotated Code of Maryland* (the "Act"). These disciplinary provisions provide that the Commission may reprimand any licensee, place any licensee or probation, or suspend or revoke a medical license if the licensee:

Fraudulently or deceptively uses a license (14-504(2));

Is guilty of immoral conduct in the practice of medicine (14-504(3));

Is professionally, physically, or mentally incompetent (14-504(4));

A prehearing conference was held on February 25, 1986 at which time Respondent was represented by counsel. The matter was not resolved at the prehearing.

1. After July 1, 1988, the Board of Physician Quality Assurance.

Subsequently, Respondent filed an action in the United States District Court for the District of Maryland to overturn the emergency suspension. The federal court action was ultimately dismissed for failure to exhaust administratively remedies and proceedings before the Commission recommenced.

The Commission conducted an evidentiary hearing in this matter on Tuesday, April 19, 1988, and Tuesday, May 3, 1988. Respondent was represented at the hearing by William E. Ehrmantraut, Esq. At the conclusion of the hearing on May 3, 1988, the Commission, by a unanimous vote of the members hearing this case, found that Dr. Carter is "professionally, physically, or mentally incompetent" under 14-504(4) of the Act. The Commission voted to reserve final disposition of the matter pending receipt of further information. Respondent fully complied with the Commission's request to provide further information, and final disposition was rendered as is contained herein.

**Findings of Fact**

The Commission finds that:

1. Respondent is a physician licensed to practice medicine in the State of Maryland. At all times relevant hereto, Respondent was subject to the jurisdiction of the Commission.

2. The parties entered into a Stipulation of Facts on April 19, 1988. The Stipulation is attached hereto as Exhibit B and is incorporated herein by reference hereto.

3. The Commission has heard testimony in connection with the prescribing of controlled dangerous substances to five patients.

4. The Commission finds that Respondent's cognitive knowledge is deficient with respect to the prescribing of controlled dangerous substances.

5. The Commission finds that Respondent's prescribing practices were so deficient in terms of examination, follow-up, and control that certain patients, if they were not already addicted to controlled dangerous substances of the type prescribed by Respondent, were caused to continue to maintain their addiction through Respondent's grossly deficient prescribing practices.

6. After listening to the testimony of the Respondent and reviewing the other evidence in this case, the Commission finds that Respondent's prescribing practices were not undertaken in a fraudulent or deceptive manner to cause of continue addiction, but, rather, that Respondent exercised a gross lack of judgment in treating patients with chronic pain.

**Conclusions of Law**

Based upon the foregoing Findings of Fact, the Commission on Medical Discipline, by the unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated 14-504(4) of the Act and finds Respondent Guilty of those charges.

**Order**

Based on the foregoing Findings of Fact and Conclusions of Law, it is hereby this 21st day of June 1988 by the unanimous vote of a quorum of the members of the Commission,

ORDERED that Respondent's license to practice medicine in the State of Maryland is SUSPENDED for a period of three (3) years from the date of the Order for Emergency Suspension subject to satisfactory completion of an approval course in pharmacology; and be it further

ORDERED that Respondent is thereafter placed on PROBATION for an additional three (3) years; and be it further

ORDERED that the suspension and probation are subject to the following terms and conditions:

1. Respondent shall immediately arrange to enter a retraining program in pharmacology, the nature, scope and terms of which are approved by the Commission.[2] The Commission must receive evidence in writing that the administrator of an approved training program is willing to provide bimonthly evaluations of Respondent's progress in the course. The course shall be designed to remedy deficiencies in Respondent's prescribing practices and recordkeeping.

2. Successful completion of the course set forth above is a prerequisite to removal of the suspension and to reinstatement of Respondent's license to practice medicine in Maryland subject to the probationary conditions set forth herein. In other words, the three year suspension of Respondent's medical license will be extended indefinitely until there has been successful completion of an approved course in pharmacology.

3. Following the successful completion of a retraining program in pharmacology or the conclusion of the period of suspension, Respondent will be placed on a three year period of probation during which time the Commission or its agents may conduct peer reviews of Respondent's medical practice. Any peer review to be conducted will emphasize the prescribing and recordkeeping aspects of Respondent's medical practice; and be it further

ORDERED That after Respondent's successful completion of the conditions of probation, the Board will entertain a petition for termination of Respondent's probationary status and reinstatement of Respondent's license to practice medicine in Maryland without any conditions or restrictions whatsoever. If Respondent has complied with all conditions of probation and if there are no outstanding complaints against Respondent, the Commission will reinstate Respondent's license. However, if the Commission determines that termination of probation is not appropriate, the Commission may extend the probationary period and may modify one or more conditions upon which Respondent was placed on probation;

*HILARY T. O'HERLIHY* MD, Chairman
Commission on Medical Discipline

2. The Commission understands that such a course is offered by the Pennsylvania College of Medicine.

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**In the Matter of**
**Mansour G. Panah MD**
**Before the Commission on**
**Medical Discipline**

**Findings of Fact,**
**Conclusions of Law, and Order**

Based upon certain information coming to the attention to the Commission on Medical Discipline (the "Commission"),[1] the Commission determined to charge Mansour Panah (the "Respondent") with violation of 14-504(3) of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland:

> Is guilty of immoral conduct in the practice of medicine. (14-504(3))[2]

The charges were predicated on Respondent's treatment of three patients who had filed complaints with the Commission.

Appropriate notice of the charges and the grounds from which they arose were given to Respondent by letter dated October 23, 1987. A hearing was held on March 1, 1988 and May 31, 1988.

The witnesses for the Respondent were ten persons who were either patients, employees, or former employees. Respondent also testified.

The following exhibits were introduced:

**State's Exhibits**

A Return Receipt
B Charge Letter which included patient records of Patients A, B, and C
C Standards of Obstetrics and Gynecologic Services
D Compendium of the Medical and Chirurgical Faculty
E Black's Law Dictionary Definition - Immoral Conduct
F Respondent's Motion to Dismiss
G State's Memorandum in Opposition
H Decision by Commission

**Defendant's Exhibits**

1A Checks and Bills of Patient A
1B Checks and Bills of Patient A
1C Checks and Bills of Patient A

1. After July 1, 1988, the Board of Physician Quality Assurance.

2. Section 14-504(3) permits the Commission to impose sanctions on a licensee who is "guilty" of immoral conduct in the practice of medicine . . .". Following a hearing, the charge under 14-504(3) was withdrawn by the consent of the parties and the Commission and was substituted with the charge under 14-504(4): "is professionally, physically, or mentally incompetent ...".

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*(ciprofloxacin HCl/Miles)*




# A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- **Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa****
- **For treatment of infections in the:**
  - **lower respiratory tract†**
  - **urinary tract†**
  - **skin/skin structure†**
  - **bones and joints†**
- **Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets**

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

†**Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CIPRO® SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

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C09327 MLR-261

# Cipro® TABLETS (ciprofloxacin HCl/Miles)

## ■ 500 mg *B.I.D.* for most infections; 750 mg *B.I.D.* for severe or complicated infections.

### BRIEF SUMMARY
### CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

#### INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

**Lower Respiratory Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae.*

**Skin and Skin Structure Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes.*

**Bone and Joint Infections** caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa.*

**Urinary Tract Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis.*

**Infectious Diarrhea** caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

#### CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

#### WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

#### PRECAUTIONS

*General:*

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

*Drug Interactions:*

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

*Information for Patients:*

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

*Carcinogenesis, Mutagenesis, Impairment of Fertility:*

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster $V_{79}$ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

*Pregnancy – Pregnancy Category C:*

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

*Nursing Mothers:*

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

*Pediatric Use:*

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

#### ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

*Adverse Laboratory Changes:* Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

#### OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

#### DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

#### HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

## CONVENIENT *B.I.D.* DOSAGE

### Recommended dosage schedule

| Infection Site* | Severity of Infection | Dosage |
|---|---|---|
| Respiratory Tract* | Mild/Moderate | 500 mg *B.I.D.* |
| Bone and Joint* Skin/Skin Structure* | Severe/Complicated | 750 mg *B.I.D.* |
| Urinary Tract* | Mild/Moderate | 250 mg *B.I.D.* |
| | Severe/Complicated | 500 mg *B.I.D.* |
| Infectious Diarrhea* | Mild/Moderate/Severe | 500 mg *B.I.D.* |

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**COMMITTED TO THERAPEUTIC EFFICIENCY**

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1D Checks and Bills of Patient A
1E Checks and Bills of Patient A
1F Checks and Bills of Patient A
2 Office Photos - 2 pictures
3 Office Photos - 4 pictures
4 Office Photos - 4 pictures
5 Black and White Lithograph
6 Medical Record of Helen Kline; 8 pages
6A Medical Record
6B Medical Record
6C Medical Record
6D Medical Record
6E Medical Record
6F Financial Statement
6G Cytology Requisition
7 Medical Record Patient A
8 Office Chart
9 Financial Record
10 Letters from Employees and Patients

**Findings of Fact**

Based on the evidence produced at the hearing, the Commission finds that:

1. At all times relevant to this case, Respondent was a physician licensed to practice medicine in the State of Maryland.

2. Respondent's medical specialty is in the field of obstetrics and gynecology.

3. Patient A is a 40-year-old woman who sought obstetrical treatment and care for the birth of a child when she was 30 in 1979.

4. Patient A testified that:

a. Respondent told her during her last three weeks of pregnancy that he was in love with her and could not wait until her pregnancy was over "so that we could go together";

b. Respondent embraced her, held her, told her that he loved her, kissed her on the lips, and fondled her breasts over her examination smock;

c. Respondent did not always have a chaperon present in the examination room;

d. Respondent stated when she was in the labor room and no one was present that he loved her; and

e. She did not return for her six week checkup because of Respondent's behavior.

5. Patient B, a 28-year-old woman, sought gynecological treatment from Respondent in 1978, when she was 18 years old. Patient B saw Respondent until 1983. Respondent was the first gynecologist Patient B had consulted.

6. Patient B testified that Respondent kissed her on the lips and tried to stick his tongue in her mouth. Patient B testified that she did not return to see Respondent after he tried to stick his tongue in her mouth, because she objected to his behavior.

7. Patient C, a 21-year-old woman, sought gynecological treatment and care from Respondent in 1985 when she was 18. Respondent was the first gynecologist Patient C consulted.

8. Patient C testified that:

a. A chaperon was not always in the examining room;

b. She had never had a breast examination before consulting Respondent;

c. The chaperon was not in the room when Respondent examined her breasts;

d. Respondent kissed her on the lips on her first visit;

e. Respondent repeatedly asked her for hugs, kissed her on the lips, and put his tongue in her mouth;

f. Respondent gave her a breast exam at each visit (although no breast abnormalities were indicated), on visits 2-7 gave patient two breast exams per visit and on one occasion three breast exams in one visit;

g. When she asked Respondent if there were any breast abnormalities to warrant repeated breast examinations, Respondent stated that she was beautiful and that she had "beautiful tits";

h. Respondent asked her if he could come to visit her at work, and asked her how she felt about dating older men.

9. Respondent's witnesses testified that Respondent hugged and kissed patients but, in their opinion, this conduct was not "sexual" in nature.

10. The conduct described by all the State's and Respondent's witnesses was consistent insofar as it indicated a pattern of behavior by Respondent involving physical contact with patients that had no valid medical purpose.

11. Respondent's witnesses' testimony did not contradict the testimony of Patients A, B, and C insofar as the Respondent's witnesses only related their respective experiences with Respondent.

12. During the course of the hearing, Patients A, B, and C testified in detail regarding Respondent's conduct toward them. Patients A, B, and C were questioned by the Commission and cross-examined thoroughly by Respondent's attorney.

13. The Commission found the testimony of Patients A, B, and C credible, consistent, and trustworthy.

14. The relationship between a gynecologist and his/her patients is one of trust in which the patient is dependent, vulnerable, and relies on the physician.

15. The relationship between an obstetrician and his/her patients is some of trust in which the patient is dependent, vulnerable, and relies on the physician.

16. There is no valid medical treatment that involves sexual contact between patient and a treating obstetrician and/or gynecologist during the course of medical treatment.

17. Respondent's behavior toward Patient A, B, and C reflects numerous breaches of medical ethics, and violations of professional standards governing the appropriate practice of obstetrics and gynecology

governing similarly situated Maryland practitioners.

18. Respondent violated the trust and dependency placed in him by Patients A, B, and C by engaging in sexual contact with these patients.

### Conclusion of Law

Based upon the foregoing Findings of Fact, the Commission finds that the Respondent violated 14-504(3) of the Medical Practice Act.

Is guilty of immoral conduct in the practice of medicine.

### Order

Based on the foregoing Findings of Fact and Conclusion of Law, on this 7th day of June, 1988 by a unanimous vote of those members of the Commission hearing this case it was voted that it shall be hereby.

ORDERED that the license of the Respondent, Mansour Panah MD, to practice medicine be suspended for 45 days, said suspension starting not later than 30 days from the date of the serving of this Order on Respondent, thus allowing Respondent a period sufficiently long enough to make arrangements for transfer of his patients.

***RONALD J. TAYLOR*** **MD, Vice-Chairman**
**Commission on Medical Discipline**

• • •

## In the Matter of Keaciel Kenneth Krulevitz MD Before the Commission on Medical Discipline

### Findings of Fact, Conclusions of Law, and Order

It having come to the attention of the Commission on Medical Discipline of Maryland (the "Commission"),[1] that Keaciel Kenneth Krulevitz MD (the "Respondent") was convicted by the Circuit Court for Baltimore City, Maryland of one count of felony Medicaid fraud on May 16, 1988, pursuant to an Alford plea entered by the Respondent to the charges levied against him in a Criminal Information filed by the Attorney General of Maryland on the same date, the Commission has grounds to charge Respondent with violations of Md. (Health Occupations) Ann. Code, Sections 14-504(6) and (22). Respondent acknowledges the Commission's authority to so charge him and to administer sanctions against his license, waives his entitlement to hearing pursuant to Md. (Health Occupations) Ann. Code Section 14-505(a), and agrees to enter into the following Consent Order.

### Findings of Fact

1. At all times relevant hereto, Respondent was and is a physician licensed to practice medicine in the State of Maryland.

2. At all times relevant hereto, Respondent was practicing as a specialist in family medicine.

3. On May 16, 1988, a Criminal Information was filed by the State of Maryland in the Circuit Court for Baltimore City, Maryland, charging Respondent with medicaid fraud.

4. On the same date, Respondent entered an Alford plea to the charges contained in the Criminal Information.

5. As a result of Respondent's Alford plea, Respondent was convicted of one count of felony Medicaid fraud. He was sentenced to eighteen (18) months of incarceration (suspended), was ordered to pay restitution to the Maryland Medicaid Program in the amount of thirty thousand five hundred forty dollars and sixty-three cents ($30,540.63), and was ordered to pay a five thousand dollar ($5,000) fine.

6. Respondent is seventy-three (73) years of age. He has been practicing medicine for nearly a half century. Respondent graduated from the University of Maryland School of Medicine in 1941, interned at Sinai Hospital, Baltimore, Maryland on a rotating internship, served a residency at Sydenham Hospital, Baltimore, Maryland, and served in the United States Naval Medical Corps during World War II. Respondent is a member, diplomate and fellow of the American Academy of Family Physicians, and has served on the Board of Directors of the Maryland Academy of Family Practice.

7. Prior to his May 16, 1988 conviction, Respondent had never been indicted or convicted of any crime, and no complaints had ever been filed against Respondent before the Commission.

8. There is no evidence that Respondent lacks the appropriate skills and competence to safely practice family medicine.

### Conlcusion of Law

Based upon the foregoing Findings of Fact, the Commission concludes as a matter of law:

That Respondent committed acts prohibited by Md. (Health Occupations) Ann. Code, Section 14-504, specifically:

> Is convicted or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside. Md. (Health Occupations) Ann. Code, Section 14-504 (60).
>
> Is disciplined by a licensing or disciplinary authority or convicted or disciplined by a court of any state or country for an act that would be grounds for disciplinary action under this section. Md. (Health Occupations) Ann. Code, Section 14-504(22).

1. After July 1, 1988, the Board of Physician Quality Assurance.

### Order

Upon the foregoing Findings of Fact and Conclusion of Law, it is the 30th day of June 1988, by a unanimous vote of those members of the Commission on Medical Discipline of Maryland who considered this case,

ORDERED that Respondent's medical license is suspended for a period of two (2) years from the date of this Order, which suspension is stayed by the Commission, provided that the following conditions are met:

1. Respondent meets all the conditions imposed upon him by the Circuit Court for Baltimore City relative to his conviction of one count of felony Medicaid fraud.
2. That Respondent performs one hundred (100) hours of community work, as specified by the Commission on Medical Discipline, within six(6) months from the date hereof.
3. That Respondent commits no wrongful act related to his medical practice, and particularly related to his prescriptive practicies, during the period of his suspension.
4. That Respondent undergoes sussessful peer review of his medical practice, with a speical focus on his prescriptive practices, as hereinafter ordered and supervised by the Commission on Medical Discipline.

And be it further

ORDERED that if Respondent violates any of the above terms of his probation, after notice and a hearing, and determination of failure to meet such condition, the Commission may lift the stay of suspension or may revoke Respondent's medical license; and be it further

ORDERED that after six (6) months after the effective date of this Order, the Commission will entertain a petition by Respondent to reinstate Respondent's license to practice medicine in Maryland, without any conditions or restrictions whatsoever. At that time, if Respondent has complied with all conditions of probation and there are no outstanding complaints pending against Respondent, the Commission will reinstate Respondent's license without any conditions or restrictions whatsoever.

***RONALD J. TAYLOR*** **MD, Vice Chairman**
**Commission on Medical Discipline**

### Consent

By this consent, I hereby admit the truth of the Findings of Fact, and accept and submit to the foregoing Order and its conditions, consisting of five (5) pages. I acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this consent, I waive all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland.

I signed this Order after having an opportunity to consult with an attorney, without reservation, and I fully understand its meaning.

***KEACIEL KENNETH KRULEVITZ MD***

• • •

## In the Matter of Shelley Laby-Gottheim MD Before the Commission on Medical Discipline

### Order for Emergency Suspension of Medical License

Based on information received from the Committee on Physician Rehabilitation regarding the mental condition of Shelley Laby-Gottheim MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law and Order.

### Findings of Fact

Based upon all the information known and available to it the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine in Maryland.

2. On May 16, 1988, the Commission received a psychiatric report prepared by Dr. Laura Marsh with respect to the Respondent.

3. Dr. Marsh reports that the Respondent was admitted to Payne Whitney Psychiatric Clinic at Cornell Medical Center in New York City on January 5, 1988 after a series of incidents which included two arrests for shoplifting, the second arrest having occurred on December 26, 1987.

4. The Respondent's first arrest for shoplifting involved toys found in her shopping bag. She explained that her two-year-old child must have placed them in the bag and the charges were subsequently dismissed aginst her.

5. Several months later, in November 1987, while the patient was dining in a restaurant with her husband and friends, she said she had to leave to buy diapers for her children.

6. In their home, her husband found 75 pairs of children's tights, 50 pairs of gloves, and multiple picture frames which he believes his wife shoplifted.

7. She was arrested again for shoplifting on December 26, 1987 and hospitalization was recommended so that she could be evaluated. She refused hospitalization at that time but was started on Desipramine 100 mg qhs for the diagnosis of a typical depressions.

8. Subsequently, during a family vacation, members of her family had to lock her in the family home in order to contain her. Soon after, she was admitted to the Payne Whitney Psychiatric Clinic.

9. During her hospitalization at Payne Whitney, the Respondent's behavior was inappropriate and difficult to

manage. The Respondent attempted to retain a physician role with co-patients, threatened to sign herself out from the hospital, and was confronted about hoarding other patients' supplies. A neurological evaluation showed MRI findings of mild cerebral atrophy in the frontal areas. The Respondent showed no change in behavior during Linthicum Carbonate therapy and was subsequently discharged.

10. Subsequently, in the care of her regular psychiatrists, neurological testing showed that she perseverated with her problem-solving techniques and had particular difficulty with complex problem-solving because of her lack of flexibility.

11. Respondent's behavior continued to be abnormal. She spent most of her days lying in bed watching news on TV and had difficulty getting up in the morning. At one point, the Respondent's husband received an anonymous typed letter threatening to kill his family because they are Jewish. Also, the Repondent's former partner in her group practice received a similar letter and had her car set on fire on the last day that the patient went to the office. The Respondent dismissed questions about these occurrences in a casual manner.

12. Respondent was admitted to Johns Hopkins Hospital-Phipps Clinic on March 28, 1988 for evaluation.

13. At Phipps, neuropsychological testing demonstrated poor judgment, moderately impaired abstract thinking, and significant denial of emotional or congnitive difficulties. In particular, the patient was noted to have difficulties applying rules of thumb or neuristics when solving complex problems. She had difficulty solving other complex problems and had a deterioration in her performance with repeated trials on some tasks.

14. While at Phipps, the Respondent has hit patients or staff members when she wasn't allowed what she wanted. She has taken food from other patient's trays and removed personal items from other patient's rooms. With both staff and visitors, she repeats the same stories without remembering that she has told the same story previously to the same person. On therapeutic leaves with her family, the Respondent's behavior has been inappropriate at times, as when she suggested to her three-year-old daughter that she ask a stranger for candy after the child's father had refused. Repeated urine toxicology screens have revealed Dramamine, Ephedrine, and Pseudoephedrine. The Respondent denied using these medications and room searches were negative.

15. Although Dr. Marsh does not reach a definitive diagnosis, she concludes that the Respondent suffers from a neurological disorder which might progress and eventually could become more apparent.

16. To practice medicine competently and safely, one must be able to understand complex situations, logically analyze and reason, have a good memory, concentrate and maintain attention, adapt to novel types of situations, and be flexible in thinking.

17. The Respondent was recently employed as an internist in a private group practice affiliated with George Washington Hospital. Although she is presently in Phipps Clinic and thus is not practicing, she has threatened to sign herself out of the hospital.

18. The inability to understand complex situations, logically analyze and reason, have a good memory, concentrate and maintain attention, adapt to novel types of situations, and be flexible in thinking when one is practicing medicine poses an imminent and grave danger to the public health, welfare and safety of the citizens of Maryland.

19. Based upon the foregoing findings of fact, the Commission has reason to believe that Respondent is professionally, physically, or mentally incompetent.

**Conclusion of Law**

Based upon the foregoing facts, the Commission finds that the public health, safety and welfare imperatively requires emergency action in this case, pursuant to State Govenment Article, 10-405(b), Annotated Code of Maryland.

**Order**

It is this 16th day of June 1988 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, 10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immedidately deliver to the Commission's administrator (1) her diploma-sized Certificate of the Board of Medical Examiners (2) her current Department of Health and Mental Hygiene License Renewal Certificate, and (3) her current wallet-size license renewal card; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written reaquest for such a hearing from the Respondent.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**

• • •

**In the Matter of**
**John J. Shigo MD**
**Before the**
**Commission on Medical Discipline**

**Order for**
**Emergency Suspension of Medical License**

Based on information received regarding the recent hospitalization of John J. Shigo MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

**Findings of Fact**

Based on all information known and available to it the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine in the State of Maryland.

2. On May 30, 1988, Respondent was found unconscious on the grass outside the garage of his residence by his daughter, Monica Shigo. The garage light was on, and the car engine was running inside the garage. No medication was found near Respondent or in or around the house.

3. On May 30, 1988, Respondent was transported via medic unit from his residence, 11800 Galaxy Lane, Bowie, to the AMI Doctors Hospital of Prince George's.

4. On May 30, 1988, at approximately 3:15 a.m., when Respondent was admitted to AMI Doctor's Hospital of Prince George's through the emergency room, Respondent was not conscious.

5. On May 30, 1988, on Respondent's admission through the emergency room of AMI Doctors Hospital of Prince George's, a past history of psychiatric care and drug overdose using Demerol IV was noted.

6. On May 30, 1988, on Respondent's admission through the emergency room of AMI Doctors Hospital of Prince George's, the reasons for admission as listed on the admitting note were (1) overdose of benzodiazepine and (2) carbon monoxide poisoning.

7. On May 30, 1988, on Respondent's admission through the emergency room of AMI Doctors Hospital of Prince George's, blood and urine samples were taken. Analysis of Respondent's blood and urine noted the presence of benzodiazepine.

8. On June 3, 1988, Respondent was transferred to a private room at AMI Doctors Hospital of Prince George's. The Physicians' Orders dated June 3, 1988 contain instructions for a 24-hour sitter with the patient (hospital or agency personnel).

9. Physicians' Orders for Respondent's care at AMI Doctors Hospital of Prince George's dated June 4, 1988 contain instructions to continue 24-hour sitter and suicidal precautions.

10. The facts and circumstances surrounding the events of May 30, 1988, when considered with Respondent's age and previous history of attempted suicide by injection of Demerol, support a finding that on May 30, 1988, Respondent attempted suicide.

11. Respondent's apparent suicide attempt on May 30, 1988 as described above suggests the existence of a diagnosable illness.

12. Respondent's apparent suicide attempt on May 30, 1988 as described above indicates that Respondent either lacks good judgment or that his judgment is impaired, thus placing at risk patients whom Respondent may treat.

**Conclusion of Law**

Based on the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, 10-405(b), Annotated Code of Maryland.

**Order**

It is this 21st day of June 1988 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, 10-405 of the Annotated Code of Maryland, Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission's Executive Director (1) his diploma-sized Certificate from the Board of Medical Examiners (2) his current Department of Health and Mental Hygiene License Renewal Certificate, and (3) his current wallet-size license renewal card; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the Respondent, and be it further

ORDERED that, in accordance with Section 14-502 of the Health Occupations Article, *Annotated Code of Maryland*, (a copy of which is attached hereto), Responded is directed by the Commission on Medical Discipline to appear at the office of Jonas R. Rappeport MD, Professional Arts Building, 101 W. Read Street, Baltimore, Maryland 21202, (301-837-7888) at 1:30 p.m. on Monday, July 11, 1988, for the purpose of a psychiatric evaluation.

***HILARY T. O'HERLIHY*** **MD , Chairman**
**Commission on Medical Discipline**

• • •

**In the Matter of**
**Cleveland Williams MD**
**Before the**
**Commission on Medical Discipline**

**Final Consent Order**

Based on information received by the Commission on Medical Discipline (the "Commission")[1] and a subsequent investigation by the Medical and Chirurgical Faculty of Maryland concerning the practice of medicine by Cleveland Williams MD (the "Respondent"), the Commission issued a charge letter dated March 23, 1988 alleging that Respondent had violated 14-504(3) of the Medical Practice Act, Health-Occupations Article, Annotated Code of Maryland (the "Act").[2]

The March 23, 1988 charge letter was predicted upon certain misrepresentations of professional credentials in applications for departmental membership and medical staff privileges in a Maryland hospital and membership in certain medical societies. The charge letter was mailed to Respondent by certified mail, return receipt requested. A prehearing conference was conducted on Thursday, April 14, 1988. The Commission conducted an evidentiary hearing on Tuesday, May 17, 1988 and Tuesday, June 7, 1988.

Following the hearing on June 7, 1988, the parties and the Commission agreed to withdraw the charge under 14-504(3) and to substitute the charge under 14-504(4). Section 14-504(4) states as follows:

> Is professionally, physically, or mentally incompetent;

In addition, the parties and the Commission agreed to a final disposition of the charge under 14-504(4) and to the resolution of all outstanding cases against Respondent. See the record extract of proceedings held on Tuesday, June 2, 1988 attached hereto as Exhibit A and incorporated herein by reference hereto.

**Findings of Fact**

The Commission finds that:

1. Respondent is a physician licensed to practice medicine in the State of Maryland. At all times relevant hereto, Respondent was subject to the jurisdiction of the Commission.

2. Respondent's medical specialty is in the field of Obstetrics and Gynecology.

3. In January, 1985, Respondent misrepresented his professional credentials in his application for Departmental membership and medical staff privileges with the Department of Obstetrics and Gynecology at Washington Adventist Hospital, 7600 Carroll Avenue, Tacoma Park, Maryland.

4. Respondent is not now and never has been certified as a diploma by the American Board of Obstetrics and Gynecology.

5. In February, 1985, Respondent also misrepresented that he was Board certified in the specialty of Obstetrics and Gynecology on forms submitted to the Montgomery County Medical Society, 15855 Crabbs Branch Way, Rockville, MD.

**Conclusions of Law**

Based on the foregoing Findings of Fact, the Commission on Medical Discipline, by the unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated 14-504(4) of the Act and finds Respondent GUILTY of those charges.

**Order**

Based on the foregoing Findings of Fact, and Conclusions of Law and the agreement of the parties it is hereby this 21st day of June 1988 by the unanimous vote of a quorum of the members on the Commission on Medical Discipline,

ORDERED that Respondent's license to practice medicine in the State of Maryland is suspended for a period of three (3) years and ninety (90) days; and be it further

ORDERED that said suspension is STAYED following the first 90 days of the suspension at which time Respondent will be placed on PROBATION for the remaining three years subject to the following terms and conditions:

1. Respondent shall not practice medicine in the State of Maryland during the first 90 days of his suspension;

2. During the entire period of Respondent's suspension and probation, Respondent shall continue psychiatric treatment in connection with the personality disorder that led to Respondent's falsification of credentials;

3. Respondent is currently undergoing treatment with Dr. Harold Wylie on a bi-weekly basis for the aforementioned personality disorder. Respondent shall continue psychiatric treatment during the course of his suspension and probation with Dr. Wylie or with another psychiatrist after notice and approval by the Commission. Psychiatric reports on Respondent's attendance and progress shall be submitted to the Commission on a quarterly basis. Respondent shall immediately notify the Commission if there is any change in the nature, scope and frequency of treatment rendered. Any changes are to be approved in advance by the Commission after consultation with Respondent's treating psychiatrist.

4. Based on the testimony presented to the Commission, it is the Commission's understanding that Respondent is no longer performing surgery and that his practice is presently confined to seeing patients in ambulatory

1. After July 1, 1988, the Board of Physician Quality Assurance.

2. Section 14-504(3) permits the Commission to impose sanctions on a licensee who is "guilty" of immoral conduct in the practice of medicine . . .". Following a hearing, the charge under 14-504(3) was withdrawn by the consent of the parties and the Commission and was substituted with the charge under 14-504(4): "is professionally, physically, or mentally incompetent ...".

clinics and in private practice. If there is any change in the nature and scope of Respondent's practice during the period of Respondent's probation, Respondent shall notify the Commission immediately.

5. During the probationary period, the Commission, or its agents, will conduct peer reviews of Respondent's medical practice as is necessary; and be it further

ORDERED that if Respondent violates any of the foregoing conditions, the Commission, after notification and hearing, may discontinue Respondent's probation and impose any disciplinary sanction it deems appropriate; and be it further

ORDERED that after three(3) years and ninety (90) days from the date of this Order and upon Respondent's successful completion of the conditions of probation, the Commission will entertain a petition for termination of Respondent's probationary status and reinstatement of Respondent's license to practice medicine in Maryland without any conditions or restrictions whatsoever. If Respondent has complied with all conditions of probation and if there are no outstanding complaints against Respondent, the Commission will reinstate Respondent's license without any conditions or restrictions whatsoever. However, if the Commission determines that termination of probation is not appropriate, the Commission may extend the probationary period and may modify one or more of the conditions upon which Respondent was placed on probation; and be it further

ORDERED that the terms set forth in Exhibit A are made a part of this Order and that any outstanding cases against Respondent currently being investigated by the Commission concerning the facts of which are currently known to the Commission are merged into this Final Consent Order and made a part hereof.

***HILARY T. O'HERLIHY*** **MD, Chairman**
**Commission on Medical Discipline**


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### Miscellaneous Meetings

**Oct 3-5 NIH Consensus Development Conference: Urinary Incontinence in Adults,** Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: A. Manning Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852.

**Oct 7-9 Advanced Trauma Life Support Course,** Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $500; 20 Cat I credits. Info: D. Soto 202-784-2074.

**Oct 22 The Second Annual John C. Dumler OB/GYN Update,** St. Agnes Hospital, Baltimore, MD. Sponsored by the Depts of OB/GYN at St. Agnes Hospital and University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Oct 26 Physicians' Cholesterol Education Program,** The Ramada Inn, 901 Dual Highway, Hagerstown, MD.. Info: 301-685-7074 or 225-5891.

**Nov 9-11 First National Cholesterol Conference,** Hyatt Regency Crystal City, Arlington, VA. Advance registration $150; conference participation limited to first 1,000 registrants. Info: The National Cholesterol Conference, 4733 Bethesda Ave. - Ste 530, Bethesda, MD 20814 (301-951-3275).

**Nov 11-13 Advanced Trauma Life Support Instructor Course,** Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $600; 26 Cat I credits. Info: D. Soto 202-784-2074.

**Nov 12 The Interface of Medicine and Psychiatry,** St. Joseph Hospital, Towson, MD. Fee: $35 physicians, $25 house staff, nurses, allied health personnel; mail registration with checks payable to Educational Fund, St. Joseph Hospital by Nov 1; after Nov 1, there is a $5 late fee. 6.5 AMA Cat I credits; 6.0 AAFP Prescribed hours. Info: A. Cronin 301-337-1113.

**Nov 12-13 Fetal Cardiology,** Key Bridge Marriott, Arlington, VA, sponsored by the Div of Pediatric Cardiology, University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Nov 19-20 Regional Review Course in Hand Surgery,** Washington, DC. Fee: physicians $200; residents, fellows, & allied health professionals $100; 12 AMA Cat I credits. Info: American Society for Surgery of the Hand, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.

**Feb 3-5 Advanced Trauma Life Support Instructor Course,** Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $600; 26 Cat I credits. Info: D. Soto 202-784-2074.

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### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. Sponsored Continued Education Activities for 1988-1989. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Oct 6-8 Fourteenth Annual Topics in Gastroenterology and Liver Disease.** Fee: physicians $370; residents & fellows $185 (with letter verifying status); 20.5 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Oct 10-14 Thirtieth Annual Emil Novak Memorial Course: Gynecology, Gynecological Pathology, Endocrinology, and High-risk Obstetrics.** Fee: $550 ($400 for residents); 41 AMA Cat I credits. Info: C. Kearney 301-955-2959.

**Oct 15 The Johns Hopkins Annual Cardiology Update 1988: Current Concepts in Cardiology,** Sheraton Inner Harbor Hotel, Baltimore. Fee: physicians $45; 5 AMA Cat I credits. Info: F. Boling 301-955-2959.

**Oct 19-21 Industrial Hygiene Air Sampling for Safety Professionals,** Dept of Environmental Health Sciences. Fee: $500; course limited to 50 participants. Info: J. Corn 301-955-2609.

**Oct 24-26, 1988; March 6-8, 1989; June 19-21, 1989. An Advanced Pediatric Life Support Course.** Fee: $445; 20 AMA Cat I credits. Enrollment will be limited. Info: C. Goodell 301-955-2959.

**Oct 29 - Nov 2 Written Boards in Emergency Medicine: A Comprehensive Review,** Hyatt Regency Baltimore. Fee: $575, $500 residents; AMA Cat I credit. Info: D. Heydinger 301-955-2959.

**Nov 4 Management of Complicated Retinal Detachments.** Fee: $175 ($90 those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Nov 5-6 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization.** Fee: $390; 14 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Nov 18-20 Update in Common Pediatric Endocrinology Disorders and Developmental Disabilities** (The Maryland Chapter of the American Academy of Pediatrics Annual Fall Mtg.), The Radisson Annapolis Hotel. Fee: three days $150; single day $50. Info: F. Boling 301-955-2959.

**Dec 1-2 PHS Policy on the Humane Care and Use of Laboratory Animals,** Stouffer Harborplace Hotel, cosponsored with NIH. 11.5 Cat I AMA credits. Info: J. Ryan 301-955-2959.

**Dec 8-10 First Annual Wilmer Institute Current Concepts in Ophthalmology.** Fee: $250, $200 (those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: C. Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer Nov 14-18. Fee $460; AMA Cat I credits.

**Advanced Practicum in Ultrasound** Dec 5-9. Fee: $460; 40 AMA Cat I credits.

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**CME Courses:** For each course additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956).

**Oct 14-15 Roots of Creativity: The Study of Creative Imagination in Infancy,** Omni International Hotel, Baltimore. Fee: $250; 10+ AMA Cat I credits.

**Oct 20 Dean's Conference #2: AIDS,** UMBC, MSTF Auditorium. Fee: $25; 6 AMA Cat I credits.

**Oct 27-29 Fourth Annual University of Maryland Contact Lens Symposium,** Hyatt Regency Inner Harbor, Baltimore. Fee: $160; 12.25 AMA Cat I credits.

**Nov 4-5 Second Medical Perioperative Management Postgraduate Course,** Harbor Court Hotel, Baltimore. Fee: $165; approx 10 AMA Cat I credits.

**Nov 5 A Brief Course in Brief Psychotherapy,** UMBC. Fee: $100; approx 6 AMA Cat I credits.

**Nov 16 Dean's Conference #3: Surgery,** UMBC. Fee: $25; 6 AMA Cat I credits.

**Nov 17 Diagnosis and Management of Osteoporosis,** Comfort Inn Airport (BWI). Fee: $35; 4 AMA Cat I credits.

**Nov 18-20 Rigid Fixation of the Craniofacial Skeleton,** Sheraton Inner Harbor Hotel, Baltimore, sponsored by MIEMSS. Fee: $425 physicians & dentists, $250 residents & fellows, $50 optional laboratory session; 19 AMA Cat I credits. Info: T. Young 301-328-2399.

**Dec 1-3 Eleventh National Trauma Symposium,** Baltimore Convention Center. Info: K. Unitas, MIEMSS 301-328-2399.

**Dec 14 Dean's Conference #4: Anesthesiology,** UMBC. Fee: $25; 6 AMA Cat I credits.

**Jan 25 Dean's Conference #5: Psychiatry.** UMBC. Fee: $25; 6 AMA Cat I credits.

**Visiting Professor Program** - Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee. Info: 301-328-3956.

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**Advanced Trauma Life Support Provider/Instructor Programs** sponsored by University of Maryland/MIEMSS. Fee: $350-500; 16-22 CMD Cat I credits. Info: Melody Nelson 301-328-2919.

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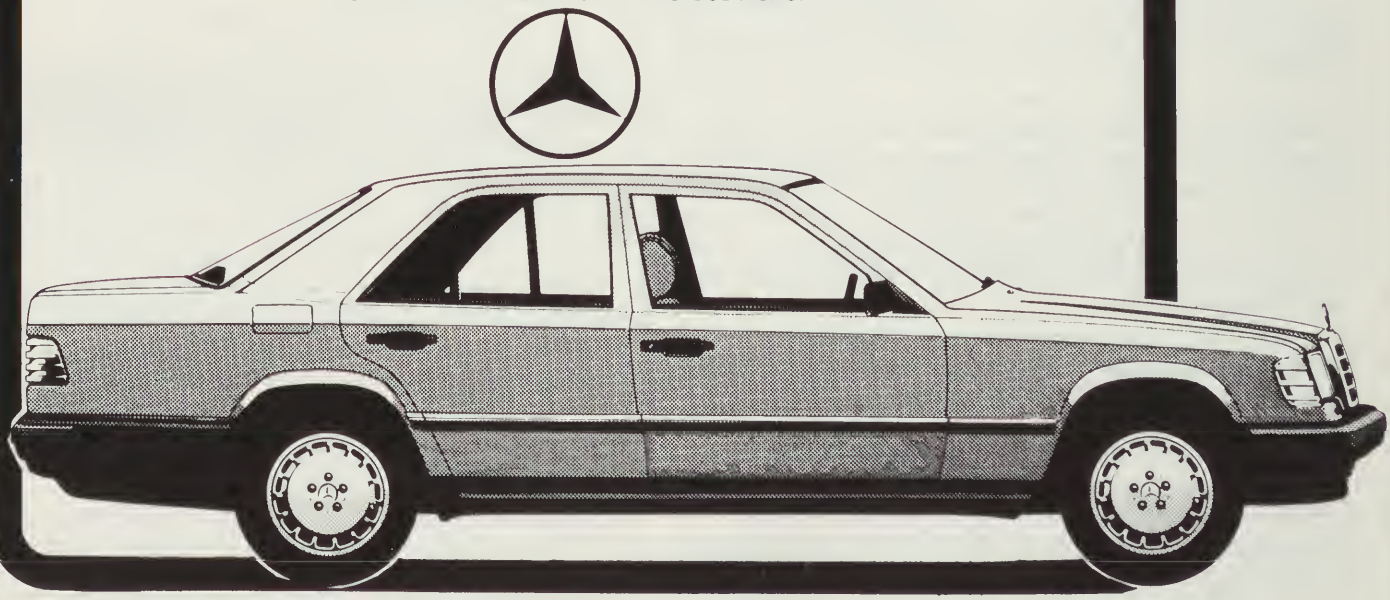
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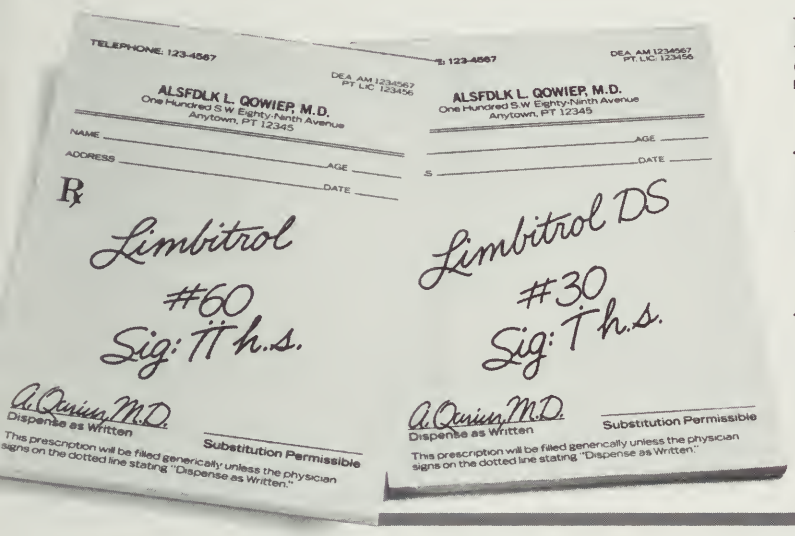
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***Usage in Pregnancy:*** **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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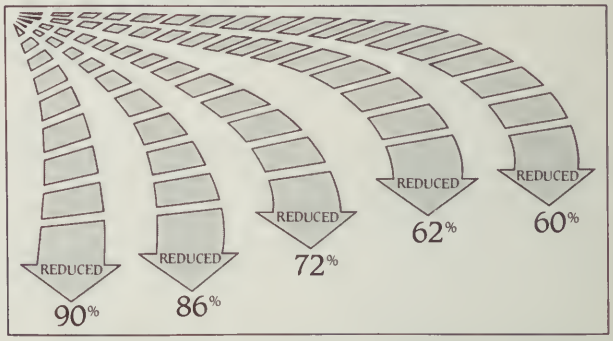
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- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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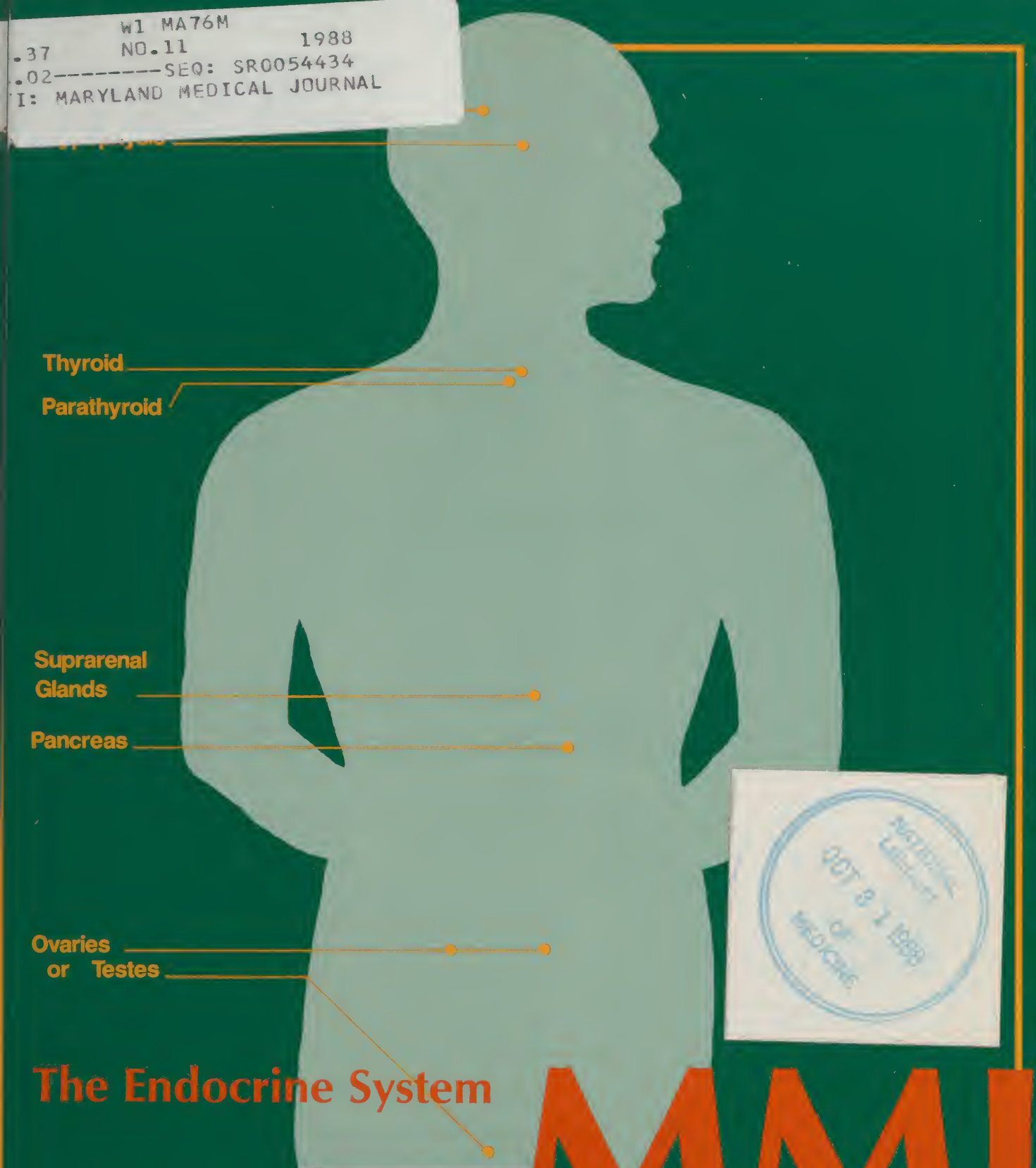
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## The Endocrine System

# MMJ

November 1988

# Maryland Medical Journal

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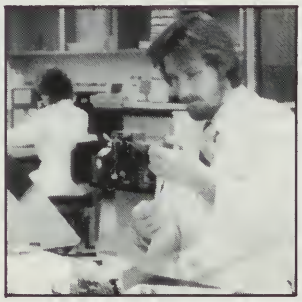
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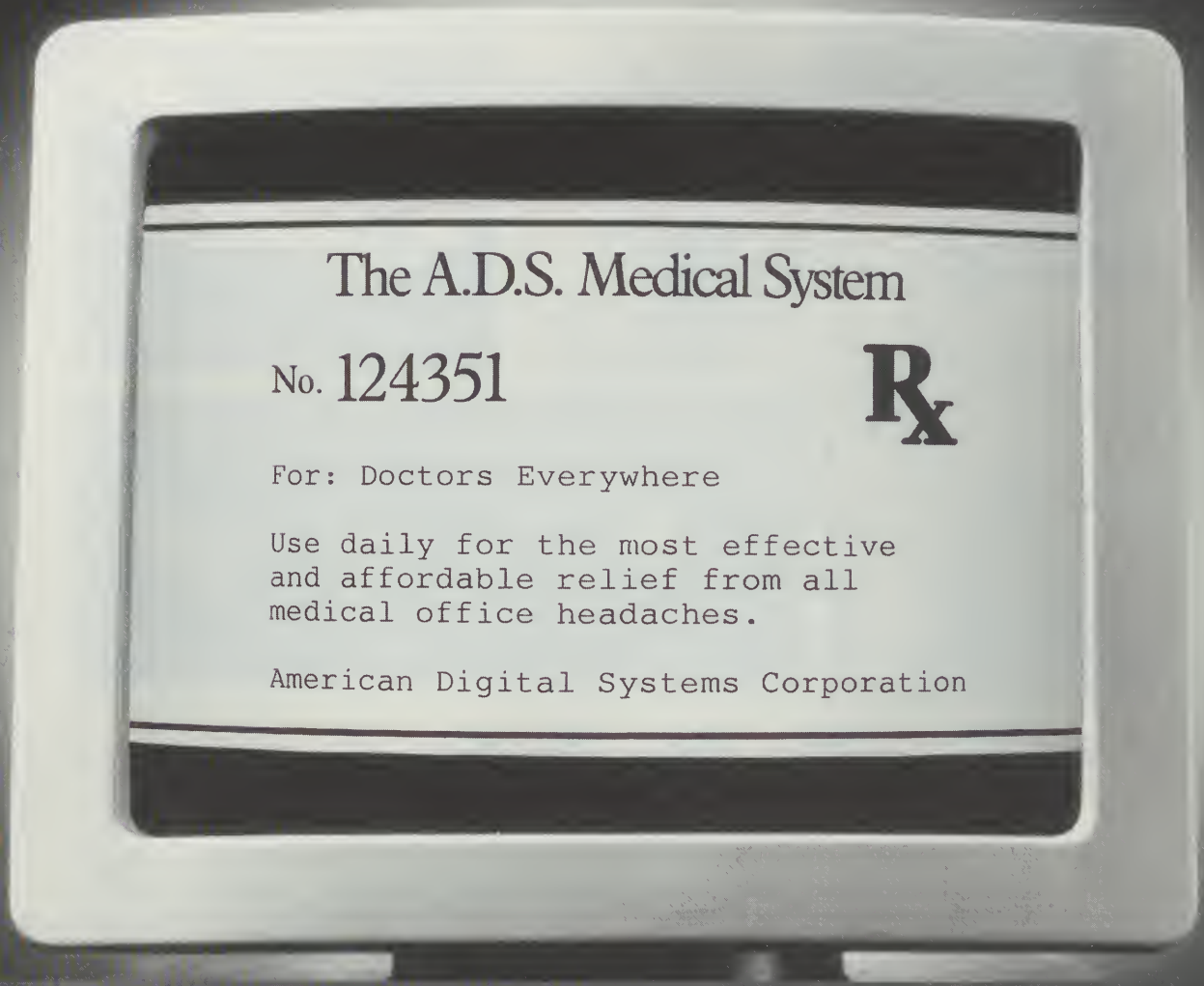
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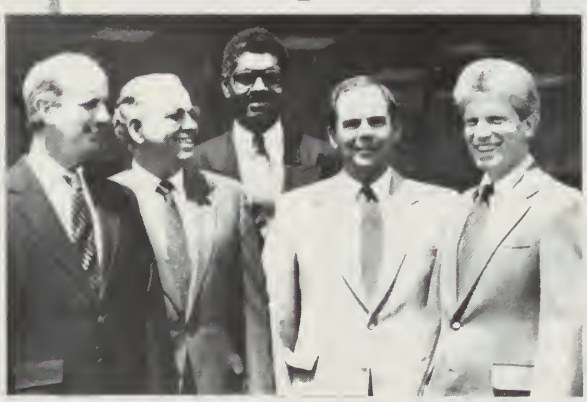
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# Highlights: Executive Committee and Council Actions

**Executive Committee**
**July 21, 1988**

• **Minutes** The Executive Committee minutes of June 16, 1988 were approved as distributed.

• **Membership Recruitment** The Executive Committee approved the concept of establishing an incentive program applicable to Med-Chi members who recruit physicians into the society. The incentive could involve a credit for Faculty dues that would be applied to the recruiting physician. Other recruiting efforts include a universal membership application form so as to accommodate the component societies and streamline the membership process.

• **Senioreach Program** Following a review of material on the Senioreach Program, the Executive Committee agreed that Med-Chi's progress in the development of this project may be presented to the Maryland House Environmental Matters Committee prior to the September presentation to the Faculty's Council. While developing this program, it was found that many referral services were, in effect, addressing the needs of the senior citizen and that this could be reported to the appropriate committee of the Maryland General Assembly. In addition, it was stated that this effort was consistent with the Council's position approving the concept and principle of providing referral services to senior citizens who request the names of physicians who will accept Medicare assignment.

• **Cataract Surgery - Global Fees** The Executive Committee was briefed on recent complaints from a physician group regarding Blue Cross/Blue Shield's payment practices for ophthalmologic evaluations prior to cataract surgery. It was obvious, after meeting with Faculty staff and Victor Forman of Blue Cross/Blue Shield, that the misunderstanding was with reference to the date of the consultation and the date of scheduling for surgery as opposed to the date of surgery. It was believed that Blue Cross/Blue Shield would accept Med-Chi's position on this matter and reimburse the physicians' group for the consultation, separate from the surgical procedure. It also is anticipated that Blue Cross/Blue Shield will soon be publishing a policy on this matter of global fees.

• **Medicaid - Diversion Services Plan** The Executive Committee reviewed draft regulations of the Department of Health and Mental Hygiene and a proposal of the Maryland Chapter of the American College of Emergency Medicine on the diversion of medical assistance recipients from inappropriate utilization of hospital emergency rooms and hospital outpatient departments.

• This matter has been referred to Med-Chi's Liaison Committee with the Department of Health and Mental Hygiene and the Legislative Committee for their input.

**Addendum**

On August 9, 1988 a conference call was held with the Executive Committee. Participants were Drs. Michael Dobridge, Reynaldo Lee-Llacer, David Nagel, Jose Yosuico, Raymond Atkins, and Mr. Angelo Troisi. Dr. Dobridge updated the committee members as to input received as a result of sending the Department of Health and Mental Hygiene (DHMH) proposal to all members of the Council and presidents of component medical societies.

It was the position of the Executive Committee to oppose the proposal in its present form and to continue to work with the DHMH toward a resolution of this funding deficit issue.

• **AMA Annual Meeting** Dr . Dobridge reported on the AMA resolution on Registered Care Technologists (RCTs) adopted by the AMA House. This resolution calls for demonstration projects to determine if development of such a category of nursing technicians would help alleviate the current crisis in bedside nursing care, which has caused much concern in the Maryland nursing community. Dr. Dobridge stated that to clarify Med-Chi's position on the issue, a memorandum has been sent to all chiefs of hospital medical staffs in Maryland as well as to component society presidents stating that Med-Chi does not sponsor or support any effort to establish such a program for RCTs in Maryland.

The resolution on "Decriminalization of Drugs," introduced into the AMA House by the Maryland Delegation, was accepted. This resolution, which calls for a study of the health consequences resulting from any changes in the laws regarding dangerous drugs, has been forwarded to Governor Schaefer and Mayor Schmoke.

Another resolution introduced by the Maryland Delegation regarding the misuse/incorrect interpretations of disciplinary data published in the Federation of State Medical Boards was adopted by the AMA House of Delegates during its annual session.

• **Ad Hoc Interspecialty Committee** Dr. Dobridge informed the committee he had established an Ad Hoc Interspecialty Committee to review multidisciplinary problem areas of medical practice as they relate to each specialty. As its first project, the ad hoc group has been assigned the task of reviewing the Resource Based Relative Value Scale. In addition, the ad hoc committee has been asked to advise the Role Relationship Committee regarding the admission of specialty physicians to the Faculty's House of Delegates.

• **OB/GYN Services in Montgomery County** The Executive Committee discussed, at length, the current situation in Montgomery County surrounding the lack of obstetric/gynecological services for the indigent. Mr. Troisi stated that he and Gerry Evans had met with representatives from both the Montgomery County Medical Society and the Montgomery County Council and discussed how best to provide these ob/gyn services. The Montgomery County Council hopes to have a program in place by the end of September. The Montgomery County Medical Society is to submit their written proposal to Med-Chi for review and possible implementation at the state level.

• **House Bill 1285** Dr. Lee-Llacer informed the committee that the results of the Governor's veto of House Bill 1285 will be that the defense may still use the defendant's associate to accomplish the certificate of merit requirements. Lacking the Governor's veto, the law would have prevented physicians from participating in the certificate of merit process for their own defense.

• **Physician Rehabilitation** Mr. Norbert Picha reported that preparations for the Conference for Impaired Physicians scheduled for September 23, 1988 at Hunt Valley Marriott were proceeding as planned, and that the Rehabilitation Loan Program had been reviewed and efforts to obtain repayment have been increased with some success.

• **Law Students** Mr. Troisi informed the Committee of a meeting with the Dean of the University of Maryland Law School during which it was agreed that close cooperation between Med-Chi and the Law School would be in the best interest of both organizations and would include the possibility of establishing medicolegal seminars for Faculty members, as well as providing law interns to Med-Chi so they may gain clinical law experience.

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Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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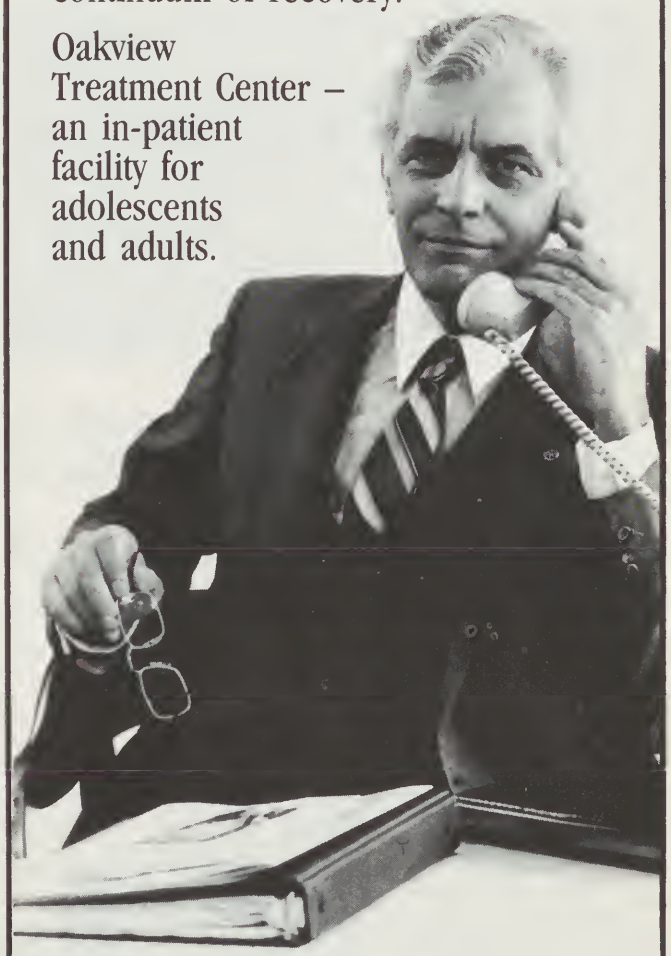

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# One Minute with Diabetes

## Neuropathic Joint Disease

*Doctor, While playing tennis about two weeks ago, I twisted my right ankle. Since then it has been swollen and feels a little warmer than the other ankle, but it does not hurt while walking. As you know, my lower extremities have been numb from diabetic neuropathy for years. Is this a new problem related to my diabetes?*

The nontender, swollen, and free-moving deformity of the ankle is so characteristic that the diagnosis of neuropathic arthropathy (Charcot joint) is easily made. However, it should be confirmed by x-ray studies. Another possibility would be osteomyelitis, but this is not likely in the absence of skin breakdown.

The treatment of neuropathic joint disease consists of elevation and rest of the part until stabilization of the joint takes place, usually three to six weeks. As soon as x-ray evidence of healing has taken place, the patient is referred for fabrication of plastazote healing sandals for light weight bearing with crutches.

Long-term care will depend on the degree of residual deformity, but the patient must be cautioned against wearing conventional shoes. Charcot feet must be protected and supported by customized molded footwear with soft cushioning interior material. It is of paramount importance that pressure ulceration be anticipated and prevented rather than be allowed to become a complication of the problem.

Diabetic neuroarthropathy is more common in the tarsal-metatarsal area, but may occur in the matatarsal phalangeal area and, occasionally, in the knee and hip region. The most serious problem with patients with neuroarthropathic joint disease is getting them to cooperate and rest the area until healing takes place. Because the joint does not hurt, instruction about resting the joint often is ignored, resulting in greater deformity and disability.

*DeWITT E. DeLAWTER MD*
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## Adjuvant Therapy in Breast Cancer Patients with Negative Lymph Nodes

Adjuvant therapy means the use of chemotherapy or hormonal therapy after "curative" surgery in patients who have no evidence of distant metastases. This is to be initiated within two to four weeks after surgery with the hope of preventing, or at least delaying, recurrences and metastasis. It has been established that such therapy is beneficial, to some extent, in patients with Stage II disease, that is, with lymph node metastasis. However, patients with Stage I disease (those with no metastases to their lymph nodes) are treated by surgery only. This is due to the long-held view that they have good prognosis when compared to lymph node positive patients.

Recent data from the National Surgical Adjuvant Breast Project (NSABP) and others revealed that patients with Stage I breast cancer have recurrence rates of 20 percent in the first five years and 40 percent at ten years. In an attempt to identify the high-risk group among these patients, data related to age, size of the tumor, and estrogen receptors (ER) were analyzed. None of these factors seemed to affect the survival except ER status. Patients with ER positive tumors have better survival than those who have ER negative tumors. However, such difference was marginal with a disease-free survival of 8 percent better in patients with ER positive tumors. Higher values of ER failed to enhance the difference.

Based on such data, the NSABP conducted two clinical trials:

1. Patients with tumors who had< ER10 fmol/mgm protein (that is, ER negative) and whose lymph nodes were negative for tumor were randomized to receive no treatment vs. a combination of chemotherapy that consisted of high dose Methotrexate, 5 Fluorouracil, and Leucovorin (folate) rescue {Protocol # B-13}.

2. Patients with tumors who had ER > 10 fmol/mgm protein (ER positive) whose lymph nodes were negative for tumor were randomized to receive placebo vs. tamoxifen (Nolvadex $^{R}$) {Protocol B-14}.

The follow-up of these patients revealed beneficial effect in both treated groups, that is, those who received chemotherapy in Protocol B-13, and those who received Tamoxifen in Protocol B-14. Such results were noted in the disease-free survival in both premenopausal as well as postmenopausal, and in ER positive and negative.

However, we must be careful in interpreting such data for two reasons: (1) the duration of the follow-up is only four years, and there may be increased failure over the time period; and (2) there was no statistical evidence that there was prolongation in the overall survival in these patients.

Therefore, there is still room for improvement, and soon the NSABP will be using two new studies: (1) In patients with ER negative tumor, chemotherapy will be slightly intensified. (2) In patients with ER positive tumors, chemotherapy will be added to tamoxifen.

The University of Maryland is an active member in the NSABP, and we hope we can admit a large number of patients on these studies throughout the state. Such patients can be treated in their community by their oncologist under the guideline of the NSABP.

*Tumor conferences are held weekly on Tuesday between 8-9 am in Room N13E28 at the University of Maryland Medical System. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

*E. GEORGE ELIAS* MD
**Professor of Surgery and Oncology**
**Director, The Surgical Oncology Program**
**University of Maryland Medical System**

*If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21202 (301-328-5224).*

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# MR UPDATE

## MRI Advances the Detection of Pelvic Disorders

## PELVIC EXAMINATION

**HISTORY:** The patient is a 26 year old female with a pelvic mass. The ultrasound examination was made difficult by a large anterior fibroid. Due to shadowing from the fibroid, it was difficult to delineate the uterus and to demonstrate the separation of what appears to be two ovarian cysts posteriorly. Without clear delineation of the uterine cavity, it was difficult to be very specific about the etiology of the mass and the cysts could be considered components of a cystadenoma or a cystadenocarcinoma.

**SCAN:** Sagittal and transverse MR images beautifully demonstrate the position of the endometrium, junctional zone, and myometrium. The large anterior fibroid (straight dark arrow) is demonstrated as a distinct mass of lower intensity than the myometrium of the uterus (curved arrow). Also, posterior fluid collections appear to be clearly separated from the main mass giving additional weight to the impression of simple ovarian cysts (open arrows).

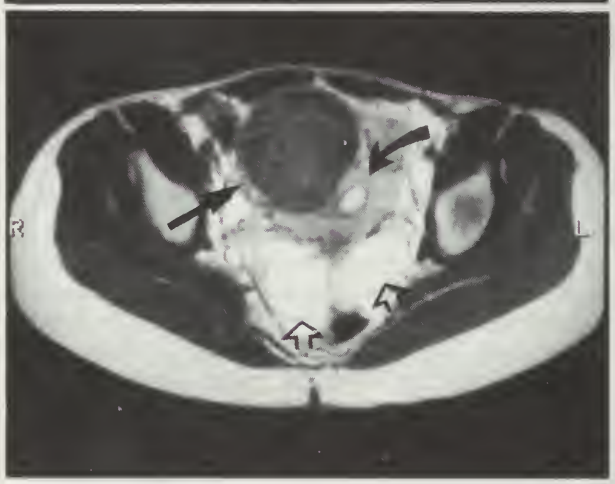
While the T1 and T2 values are not specific for fibroids or ovarian cysts, the higher tissue contrast of MRI allows clearer anatomic separation of structures. This in turn allows a more confident diagnosis of two coexisting benign processes rather than a single malignant mass.

**NOTE:** The high tissue contrast of MRI is very useful in pelvic imaging. In cases of multiple fibroids, it allows precise delineation of the position of each fibroid which can be useful in uterine sparing surgery. It is also excellent for delineating the depth of invasion in endometrial carcinoma. It is very sensitive in the detection of pelvic nodal metastases.

**MRI HIGHLIGHTS:** MRI, in general, has increased sensitivity for tissue differentiation as compared to CT. This is especially true in bone marow imaging where it has been shown to be more sensitive than radionuclide scanning for marrow replacing processes. This sensitivity is well known in the early detection of metastatic lesions and aseptic necrosis. MRI is also very useful in the depiction of subtle stress fractures or fractures in osteoporotic bones that may be difficult to demonstrate even with conventional tomography.










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**Adele Wilzack, R.N., M.S.**
Secretary of Health and Mental Hygiene

**J. Mehsen Joseph, Ph.D., Director,**
Community Health Surveillance Administration

**Ebenezer Israel, M.D., M.P.H., Director,**
Epidemiology and Disease Control Program

**EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER**
COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

**NOVEMBER 1988**

## PNEUMOCOCCAL VACCINE -- AN INCREASED EMPHASIS

The Division of Immunization, Maryland Department of Health and Mental Hygiene, is initiating an educational and promotional campaign on pneumococcal vaccine in Maryland.

Pneumococcal vaccine protects people against an organism which can cause serious health problems in people who are at risk, especially elderly persons 65 years of age or older, and persons with chronic medical conditions. More emphasis is needed in using pneumococcal vaccine, because despite advanced therapies and medical care, this disease is still one of the leading causes of death in the United States. About half a million cases of pneumococcal disease and 40,000 pneumococcal-related deaths are estimated to occur annually in the United States.

The pneumococcal vaccine currently available contains 23 capsular types of Streptococcus pneumoniae which are responsible for approximately 90% of the invasive pneumococcal infections in the United States. Only one dose of vaccine is needed to provide protection against pneumococcal disease. Revaccination is not recommended because of increased adverse reactions to subsequent doses. Many persons who need influenza vaccine also need pneumococcal vaccine and the vaccines can be given simultaneously, but different sites should be used.

The Centers for Disease Control's immunization survey in 1985 indicated that fewer than 10% of high risk individuals have ever received pneumococcal vaccine. If aggressive efforts are made to increase the use of pneumococcal vaccine, health care providers could prevent literally thousands of deaths each year.

The Maryland Department of Health and Mental Hygiene strongly recommends that physicians and other health care providers including hospitals, clinics, and nursing homes in Maryland immunize high risk individuals with pneumococcal vaccine.

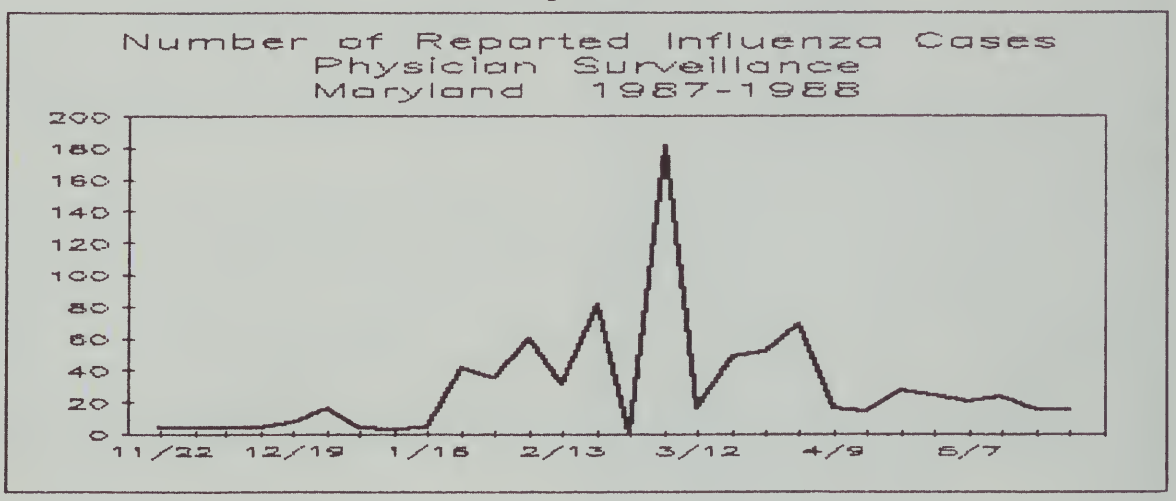
More information on pneumococcal vaccine can be obtained from your local health department or by contacting the Division of Immunization, Maryland Department of Health and Mental Hygiene (301) 225-6679.

## INFLUENZA PROGRAM 1988-1989

Each winter, different variants of the influenza virus circulate and cause disease and death in the U.S. between December and April.

In 1987-88, influenza took a heavy toll in Maryland, especially in nursing homes. Figure 1 shows the trend in influenza reporting during the 1987-88 season. The outbreak peaked in late February and March. The strains isolated in Maryland were influenza A/Sydney, A/Shanghai, and A/Victoria-like, all H3N2.

Figure 1




Drs. Currier and Shekar of the Center for Clinical Epidemiology questioned a random sample of 70 of the state's approximately 210 nursing homes to determine the influenza impact. The survey disclosed that:

- 55% of nursing homes had outbreaks of influenza in the 1987-88 season;
- There was a mean attack rate of 28%, despite immunization and amantadine treatment; and,
- 23% of outbreaks were not reported to the local or state health departments.

Our goal is to minimize influenza-associated morbidity and mortality. To that end, public health agencies, institutions, nursing homes, laboratories, and private physicians and clinics, must work cooperatively to achieve the following statewide influenza control objectives:

1) **IMMUNIZATION AND CHEMOPREVENTION;**
2) **SURVEILLANCE;**
3) **TREATMENT; and,**
4) **CONTROL.**

Each county, health care facility, and institution, needs an influenza program with similar objectives. The steps necessary to achieve these objectives should be tailored to the needs of the group and the resources available.

In September, we published the influenza immunization guidelines and discussed amantadine use. Below are listed recommendations for physicians:

**HOW PHYSICIANS CAN HELP CONTROL INFLUENZA:**

**--IMMUNIZE:**

Encourage those patients at risk and those in nursing homes and institutions to receive influenza vaccine. Immunization is also recommended for physicians and other health care providers who interact with patients at risk.

**--REPORT CASES AND OUTBREAKS:**

Physicians and other health care providers are required under Code of Maryland Regulations to report influenza cases weekly by total number of cases to the local health department (additional reporting cards, DHMH 1140's, can be obtained by calling your local health department or calling 225-6712). Phone your local health department or call 225-6677 to report outbreaks of influenza occurring in nursing homes, schools or other groups.

**--CULTURE-ILL PATIENTS:**

Obtaining pharyngeal specimens for viral culture on a few cases with classic symptoms of influenza, especially early in the outbreak, helps us to document the presence of the influenza virus in our state and the strain(s) circulating. Viral throat culture kits can be obtained by calling 225-6120.

**--TREAT:**

Amantadine given early in the course of influenza A leads to a milder and shorter course of illness. Amantadine can be given for prophylaxis of asymptomatic individuals at risk. Appropriate antibiotics are necessary if influenza is complicated by secondary bacterial infections. Advise against the use of aspirin-containing products in children to avoid Reye's Syndrome.

**--CONTROL:**

Review infection control guidelines with nursing homes in which you attend. Employees with influenza can spread the virus to patients at risk if they work while infectious; best to exclude employees who are ill.

Guidelines for influenza control and surveillance will soon be mailed to health departments and nursing homes. We appreciate your cooperation.

# MARYLAND AIDS UPDATE

SEPTEMBER 30, 1988

AIDS ADMINISTRATION -- DIVISION OF AIDS SURVEILLANCE
MARYLAND DHMH 201 WEST PRESTON ST. BALTO. MD 21201 301-225-6707
aids information and referral hotlines: 945-AIDS 1-800-638-6252

## MARYLAND AIDS STATISTICAL UPDATE

### I. Cases by county and vital status:

| | Since 1/1/88 | | | Since 1/1/81 | | |
|---|---|---|---|---|---|---|
| | Alive | Deceased | Total | Alive | Deceased | Total |
| Baltimore City | 92 | 45 | 137 | 218 | 323 | 541 |
| Anne Arundel | 6 | 2 | 8 | 16 | 29 | 45 |
| Baltimore | 9 | 3 | 12 | 25 | 49 | 74 |
| Carroll | 0 | 0 | 0 | 1 | 4 | 5 |
| Harford | 3 | 1 | 4 | 10 | 13 | 23 |
| Howard | 5 | 3 | 8 | 9 | 13 | 22 |
| **Metro Baltimore subtotal:** | 115 | 54 | 169 | 279 | 431 | 710 |
| Montgomery | 41 | 9 | 50 | 103 | 116 | 219 |
| Prince George's | 42 | 12 | 54 | 112 | 182 | 294 |
| Calvert | 0 | 0 | 0 | 4 | 2 | 6 |
| Charles | 2 | 1 | 3 | 3 | 2 | 5 |
| Frederick | 4 | 1 | 5 | 8 | 8 | 16 |
| St. Mary's | 2 | 0 | 2 | 3 | 3 | 6 |
| **Metro DC(MD) subtotal:** | 91 | 23 | 114 | 233 | 313 | 546 |
| Caroline | 1 | 0 | 1 | 3 | 6 | 9 |
| Cecil | 3 | 0 | 3 | 5 | 2 | 7 |
| Dorchester | 0 | 0 | 0 | 3 | 4 | 7 |
| Kent | 0 | 0 | 0 | 1 | 1 | 2 |
| Queen Anne's | 0 | 0 | 0 | 0 | 0 | 0 |
| Somerset | 0 | 1 | 1 | 0 | 4 | 4 |
| Talbot | 0 | 1 | 1 | 2 | 3 | 5 |
| Wicomico | 4 | 1 | 5 | 5 | 9 | 14 |
| Worcester | 1 | 0 | 1 | 1 | 3 | 4 |
| **Eastern Shore subtotal:** | 9 | 3 | 12 | 20 | 32 | 52 |
| Allegany | 1 | 0 | 1 | 1 | 5 | 6 |
| Garrett | 0 | 0 | 0 | 0 | 1 | 1 |
| Washington | 3 | 0 | 3 | 5 | 10 | 15 |
| **Western MD subtotal:** | 4 | 0 | 4 | 6 | 16 | 22 |
| **Division of Corrections:** | 2 | 0 | 2 | 9 | 8 | 17 |
| **MD TOTAL:** | 221 | 80 | 301 | 547 | 800 | 1347 |

| | Cases | Deaths |
|---|---|---|
| Washington, D.C. | 1366 | 983 |
| Virginia suburbs | 395 | 205 |
| Maryland suburbs | 546 | 313 |
| **METRO D.C. TOTAL:** | 2,307 | 1,501 |
| **NATIONAL (CDC DATA AS OF** Sept. 26, 1988 ) | 74,447 | 41,925 |

| | Since 1/1/88 Cases | % | Since 1/1/81 Cases | % |
|---|---|---|---|---|
| II. **Sex** | | | | |
| Male | 256 | 85.0 | 1190 | 88.3 |
| Female | 45 | 15.0 | 157 | 11.7 |
| Total: | 301 | 100.0 | 1347 | 100.0 |
| III. **Race** | | | | |
| White | 124 | 41.2 | 599 | 44.5 |
| Black | 172 | 57.1 | 712 | 52.9 |
| Hispanic | 5 | 1.7 | 34 | 2.5 |
| Other | 0 | 0.0 | 2 | 0.1 |
| Total: | 301 | 100.0 | 1347 | 100.0 |
| IV. **Age** | | | | |
| 0-12 | 7 | 2.3 | 30 | 2.3 |
| 13-19 | 2 | 0.7 | 8 | 0.6 |
| 20-29 | 64 | 21.3 | 279 | 20.7 |
| 30-39 | 129 | 42.8 | 570 | 42.3 |
| 40-49 | 65 | 21.6 | 279 | 20.7 |
| 50+ | 34 | 11.3 | 181 | 13.4 |
| Total: | 301 | 100.0 | 1347 | 100.0 |
| V. **Disease at Diagnosis** | | | | |
| Candidiasis | 35 | 11.6 | 185 | 13.7 |
| Cryptococcosis | 20 | 6.7 | 108 | 8.1 |
| Kaposi's Sarcoma | 13 | 4.3 | 69 | 5.1 |
| M. avium | 13 | 4.3 | 124 | 9.2 |
| P.c. pneumonia | 121 | 40.2 | 515 | 38.2 |
| Both KS and PCP | 2 | 0.7 | 22 | 1.6 |
| Other Opportunistic Infection: | 97 | 32.2 | 324 | 24.1 |
| Total: | 301 | 100.0 | 1347 | 100.0 |

### VI. YEAR OF DIAGNOSIS

| | Cases | Deceased | (%) |
|---|---|---|---|
| | Number of cases diagnosed in year now known to be | | |
| 1981-1982 | 10 | 10 | (100%) |
| 1983 | 33 | 32 | (97.0%) |
| 1984 | 85 | 81 | (95.3%) |
| 1985 | 195 | 169 | (86.7%) |
| 1986 | 275 | 191 | (69.4%) |
| 1987 | 448 | 234 | (52.2%) |
| 1988 ytd | 301 | 83 | (26.6%) |
| Total: | 1347 | 800 | (59.2%) |

# STAT!

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# Executive Director's Newsletter

November 1988

**AIDS TESTING AND COUNSELING BILL**

The AIDS Testing and Counseling Bill was passed by the House of Representatives by a vote of 367-13. All representatives from Maryland supported this legislation. The amendment to the bill which would require physicians to report names of HIV-positive individuals to public health officials was not included in the bill.

**MED-CHI ENDORSES MEDICAL MUTUAL LIABILITY INSURANCE**

On September 24, 1988 the Council of the Med-Chi Faculty unanimously voted to endorse the Medical Mutual Liability Insurance Company as an insurance company which Maryland physicians can rely upon for liability coverage.

**MED-CHI SUPPORTS GUN CONTROL LEGISLATION**

At Med-Chi's Semi-Annual meeting September 24, the House of Delegates voted that Med-Chi give its full support to the Gun Control Law. Passage of the upcoming referendum would ban ''Saturday Night Specials'' and undetectable handguns.

**MED-CHI RESOLUTIONS**

Resolutions on the following topics were passed at the House of Delegates meeting in September: Gun Control Legislation, The Office of Inspector General Bounty Hunting System, Graduates of Non-United States Medical Schools, Hospital Medical Staff General Liability Indemnification, Nursing Shortage, Medical Denials-Lack of Due Process, Medicare Reimbursement Category for Social Admission and Continued Hospital Stays, Physician Services Costs as Reported by HHS and Medicare, AIDS Education.

**MEDICARE MANDATED ASSIGNMENT**

The Med-Chi House of Delegates will meet on November 19, 1988 to discuss Medicare Mandated Assignment and the issue of whether or not to support a means test. All members should contact their component representative(s) to communicate their feeling relative to these issues.

**PRECARE**

PRECARE, a statewide telephone referral service for seniors seeking care on assignment, is fully operational. Sponsored by Med-Chi, Component medical societies and the Maryland Office on Aging, Precare has the personal endorsement of Governor Schaefer.

AMPHETAMINE PRESCRIPTIONS

Under Maryland law, Article 27, Section 285(a-2) and (b), a physician may not dispense, administer or prescribe a methamphetamine or an amphetamine except for documented conditions of narcolepsy, hyperkinesis or minimal brain damage, or unusual or rare cases approved by a medical consultant named by the Department of Health and Mental Hygiene. Within 10 days of the initial prescription, the physician must notify; the Faculty's Committee on Drugs and submit an application for approval to prescribe amphetamines. The Committee will review the application to determine whether to issue the physician a prescriber number for each patient.

INCIDENTS VS. CLAIMS

Medical Mutual wants physicians to be aware that under the terms of your Medical Mutual policy, a claim and an incident are two very different terms. An incident occurs when you notify Med-Mutual that something has "gone wrong". No matter how serious an incident, a claim does not exist until a demand for compensation is made on or on behalf of an injured party. Med-Mutual urges its physicians to notify them of incidents because their staff may be able to advise you on ways to manage the situation in order to present the incident from developing into an actual claim. In the event that a claim arises out of an incident, early reporting of the circumstances allows Medical Mutual to prepare for your defense.

FLU VACCINES

The Maryland State Health Department plans to educate the physicians and persons over 65 on the use of pneumococcal vaccine. Public health officials are encouraging physicians to offer pneumococcal vaccine along with the influenza vaccine in their offices. Medicare and Medical Assistance will reimburse the cost of the vaccine.

MMPAC DUES

Med-Chi would like to remind its members to include your MMPAC dues as part of your payment for your 1989 dues notice.

Angelo Troisi, FACHE
Executive Director

# Quality Practice Digest

LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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## NEW ETHICAL OPINION ON M.D. OR D.O. ASSISTANT'S FEE

In light of the discontinuance of surgical residents in some hospitals, the practice of third party carriers to deny reimbursement of surgical assistants, the Medicare reimbursement restrictions on assisting at certain surgical procedures (e.g., ophthalmologist and first assistant in cataract surgery), and the necessity of using M.D. or D.O. assistants for certain invasive procedures (e.g., coronary angioplasty), the Committee on Professional Ethics reviewed its stated prohibition against fee splitting as it applied to M.D. or D.O. assistants's fees.

It is the opinion of the Committee that a physician may engage and pay for the assistance of an M.D. or D.O. assistant if:

1. The use of an assistant is in the best interest of the patient; and
2. The patient has been informed of:
   (i) The necessity for the assistant; and
   (ii) The financial arrangement for engaging the assistant.

The following ethical statement was adopted by the Council on September 24, 1988:

M.D. or D.O. Assistant's Fee. It is ethically permissible for a physician to engage an M.D. or D.O. assistant, if the assistance of a M.D. or D.O. assistant is in the best interest of the patient. This principle applies whether or not a third party payor covers this service. The attending physician should inform the patient in advance of the importance of a M.D. or D.O. assistant and the fact that the patient may be billed for the

M.D. or D.O. assistant's fee. In circumstances in which there is an emergency and the informing of the patient is not possible, it would be appropriate for an assisting physician to bill the patient if the third party payor denies the claim. It is ethically permissible in certain circumstances for a physician to engage other physicians to assist him in the performance of a procedure and to pay a reasonable amount for such assistance, provided the nature of the financial arrangement is made known to the patient. This principle applies whether or not the assisting physician is the referring physician.

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## LETTERS OF TERMINATION OF PHYSICIAN/PATIENT RELATIONSHIP

While a physician has the right to choose whom the physician will treat, the physician may not abruptly terminate the physician/patient relationship. If a physician feels that he cannot provide good care to a patient for whatever reason, the physician must notify the patient in writing of the decision to terminate the physician/patient relationship. Except for the death or sudden illness of a physician, the physician must notify the patient in a timely manner that will permit the patient to locate another physician. It is suggested that 2 to 4 weeks in a suburban/urban area or 4 to 6 weeks in a rural area is sufficient notice. The letter should be sent by certified mail, return receipt requested.

Generally, a physician who is planning to retire or sell his practice can usually plan to give more advance notice to his active patients. A letter is one of the methods that can be used to notify the physician's active patients. See Quality Practice Digest, April, 1988 issue of Maryland Medical Journal for the ethical statement on "Sale or Closing of Medical Practice".

Unless you have made arrangements for another physician similarly qualified to assume care of your patient, do not cease care of a hospitalized patient, a patient who requires continuing care, or a pregnant patient.

The following are sample letters printed for informational purposes only, and should be not considered legal advice.

TERMINATION OF CARE FORM LETTER

Date:_____

Dear:_____

This is to inform you that I can no longer be your treating physicians as of _____ because (optional)

_____

_____.

You might wish to call the county medical society for names of physicians in the area ( (301)_____). Please notify my office of the name and address of your new physician so that your medical records can be forwarded. Your medical records will be available in my office for the time require by law for retaining medical records.

Sincerely,

TERMINATION OF CARE FORM LETTER

(DEATH, RETIREMENT, OR SALE OF PRACTICE)

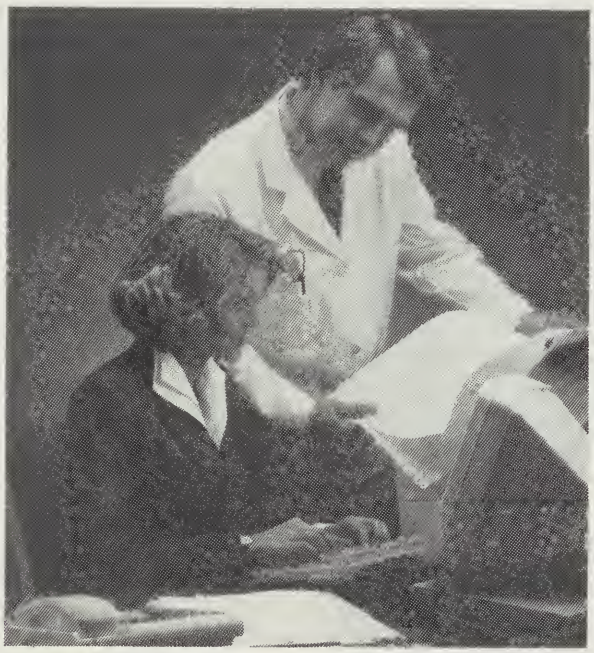
Date:_____

Dear:_____

This is to inform you that _____ can no longer be your treating physician as of _____ because _____ (retirement from or sale of the practice or death). You might wish to call the county medical society for names of physicians in the area ( (301)_____ _____). Please notify the office of the name and address of your new physician so that your medical records can be forwarded. Your medical records will be available in the office until _____. After _____, your records will be available at _____.

Sincerely,

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# Community Based Cardiovascular Risk Reduction Programs

*THOMAS A. PEARSON MD, PhD; BRADLEY O. BOEKELOO PhD; and SANDRA GRAZIANO PhD*

**Community based interventions are needed if cardiovascular risk-factor levels in the population are to be reduced. Several demonstration programs in the US and abroad have been designed to have a significant public health impact on cardiovascular morbidity and mortality. Such community programs complement the physician's health education efforts with patients and their families.**

Individuals in the top 10 percent of the risk factor distribution produce only a small proportion of the cardiovascular (CVD) cases that occur in the population.[1] For example, only 10 percent or so of excess coronary cases come from individuals with cholesterol levels above 310 mg/dl whereas approximately 75 percent of excess coronary heart disease deaths occur in individuals with cholesterol levels between 220 and 310 mg/dl.[1] The same is true of high blood pressure. About half the excess coronary heart disease deaths occur in the major portion of the population, whose diastolic pressures are under 100 mmHg.[2]

Because individuals with moderate risk-factor levels outnumber the few high-risk individuals and because the presence of multiple risk factors has a synergistic effect, a major reduction in the number of disease cases in the community can occur only if risk-factor levels are modified in the great majority of individuals. This implies that a community based effort to reduce CVD risk factor levels is needed if significant public health impact is to be realized.[3]

A second reason for using a community approach in the control of CVD is that many of the cardiovascular risk factors are behavioral and are largely determined by social forces and other environmental factors. Eating patterns, diet composition, and regular physical activity are socially learned behaviors strongly influenced by cultural norms.[4] Thus, attempts to change such behaviors must be addressed to the community at large.

## Community Based Cardiovascular Risk - Reduction Programs

The first community based CVD risk-reduction programs were initiated in the early 1970s. In Finland, the North Karelia Project began in 1972. At about the same time, the Stanford Three Community Study started in the USA.

In 1977, a communitywide prevention program began in two towns in Switzerland. In 1978, the Stanford Three Community Study evolved into the Stanford Five City Project. In 1980, preliminary work began on both the Minnesota Heart Health Program and the Pawtucket Heart Health Program.

Other studies, using comprehensive educational methods, have been carried out in Australia, the Federal Republic of Germany, and South Africa.[5] A community based program sponsored by the Centers for Disease Control has recently been organized in two South Carolina communities.

### North Karelia Project

In a survey conducted by the Seven Countries Study in 1970, Finland was found to have the highest rate of CVD mortality, especially in the eastern portion of the country.[6] The North Karelia Project was begun in response to these high CVD rates. Although the project originally was designed to run for five years (1972 to 1977), initial results were sufficiently encouraging to continue the project through 1982.[7] The program compared changes in North Karelia (a province in eastern Finland) with respective changes in a matched reference area to give the net change during the study period.

During the 10 years of the program (1972 to 1982), reductions in risk-factor levels were obtained. Among the male population in North Karelia, a 27 percent net reduction in smoking, 3 percent net reduction in mean serum cholesterol level, and a 1 percent net reduction in mean diastolic blood pressure were documented. The changes in serum cholesterol level (1 percent net reduction) and diastolic blood pressure (2 percent net reduction) in women were similar to those seen in men; the change in smoking rates among women was small.[1]

The Finnish program considered whether the observed changes in CVD risk factors resulted in changes in CVD mortality. The study found that for the 1974 to 1979 period, age-standardized male CVD mortality decreased by 22 percent in North Karelia, 12 percent in the reference area, and 11 percent in all Finland (excluding North Karelia). Thus, the reduction in coronary mortality among North Karelian men was double that seen in the reference area and the rest of the country.

The authors, at the time this article was prepared, were with the Preventive Cardiology Center of the Johns Hopkins Hospital. Dr. Pearson is now Principal Investigator of the Connunity Cardiovascular Program of Otsego and Schoharie Counties, NY, and Director of the Mary Imogene Bassett Research Institute, Cooperstown, NY.

*HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.*

Among North Karelian women, CVD mortality also decreased significantly more than in the rest of the country.[1]

### Stanford Three Community Study

The Stanford Three Community Study began in 1972 and ran for three years. The objectives of the study were to determine whether a mass-media health education program could achieve a reduction in the overall risk of heart disease. Two California towns were compared with a third reference town over three years. The three towns were matched as closely as possible with respect to socioeconomic status, minority-majority distribution, and population size.

In the two treatment towns, an extensive mass-media campaign was carried out over two years. In one of the treatment towns, the mass-media campaign was supplemented by personal counseling for a small subset of high-risk individuals.[5] The health education program in the two treatment towns employed radio, television, and the print media. Because both towns had a Spanish-speaking minority, media materials were presented in English and Spanish. Subjects (550 per town, ages 35 to 59) were recruited into the study during a baseline survey done in 1972. The mass-media educational program began immediately after the initial survey and continued for one year. In 1973 a second survey was performed; following the completion of this survey, a second year of the media campaign was carried out. A third survey was performed in 1974. A reduced educational program was continued thereafter.

The annual surveys were designed to measure knowledge about heart disease and individual behavior related to cardiovascular risk (diet, exercise, smoking). Physiologic indicators of risk (blood pressure, relative weight, and plasma cholesterol level) were measured at the time of each survey. For each study participant, the overall risk of coronary heart disease developing within 12 years was estimated by a multiple logistic function.[8] This function incorporated the person's age, sex, plasma cholesterol level, systolic blood pressure, relative weight, smoking-rate, and EKG findings of left ventricular hypertrophy. After two years of the health education program, the treatment communities showed a substantial decrease in risk of CVD. The net difference in estimated total risk between the control and treatment communities was 23 percent to 28 percent.

### Swiss Program

In 1977, Gutzwiller and associates began a community oriented program in Switzerland to reduce CVD risk factors. The study was carried out in two intervention towns and two control towns. Following a three-year intervention program, the authors reported that 26 percent of smokers in the intervention towns quit smoking, compared to 18 percent in reference towns. In intervention towns, a significant net increase also was found in the proportion of hypertensive patients under effective control. Following cessation of research funding, the program was continued by community groups in the intervention towns.[9]

### Five City Project

The success of the Three Community Study in California led to the Stanford Five City Project, which compared five small cities of approximately 15,000 people each. This project, begun in 1978, ran for eight years and was conducted in two intervention communities and three reference communities. It was designed to test two hypotheses: first, whether a community wide educational program can produce a 20 percent decline in CVD risk factors within a general population; and second, whether this reduction in CVD risk will lead to a decline in cardiovascular disease morbidity and mortality that is significantly greater in the treatment communities than in the reference communities.[10]

A major goal of the program was to develop a cost-effective model program that could be adopted by other communities. Educational programming in the two intervention communities began in 1980 and continued for six years. Print media, radio, and television were employed with printed material and broadcasts in both English and Spanish. Community programs, such as classes and seminars, were developed in collaboration with local health departments, schools, hospitals, and other health service agencies. A community surveillance system that tracks cardiovascular disease event rates (both fatal and nonfatal) has been developed.[11]

### Minnesota Project

The Minnesota Heart Health Program (MHHP) began in 1980. This ten-year project is being conducted in Minnesota, North Dakota, and South Dakota. The programs's major goals are to achieve reductions in the main CVD risk factors and to demonstrate a reduction in CVD morbidity and mortality rates. MHHP is committed to developing and implementing strategies that will not only increase community awareness of CVD risk factors but also promote behavior changes conducive to decreasing risk-factor levels. Following the termination of research funding, it is expected that localities will continue the education programs.[12] Six communities (three education sites and three comparison sites) have been selected for the study; mortality trends and most risk-factor levels were shown to be similar in the intervention and comparison communities at baseline.[13] This program is city based. Risk factor surveillance and assessments of behavior change are made annually in surveys of adults aged 25 to 74. CVD morbidity and mortality surveillance is being done by surveying medical charts in 35 of the 36 hospitals that serve the six communities.

The community organization approaches employed by the MHHP and the steps involved modifying com-

munity norms to incorporate heart-healthy behavior have been described.[14] In the three communities selected for education, multiple strategies have been used. Community leaders and representatives of local organizations have been asked to serve on a Community Advisory Board or on one of the Board's three task forces. Media education has been carried out using newspapers, radio, and television; risk-factor screening has been done at the Minnesota Heart Health Center; adult education classes have been presented; school-based programs have involved both students and their parents; educational programs for health professionals have been organized. Finally, community wide risk-factor education campaigns have been used to focus community attention on a single risk factor for a defined period of time. The program has been operating for three years in the first of the intervention communities. After two years of operation, the Minnesota Heart Health Center had screened 60.5 percent of all age-eligible adults in the community. Approximately 11 percent of the adult population had attended at least one health education class. After three years, 64.5 percent of the Mankato community physicians had attended professional education programs designed by the MHHP.[12]

### Pawtucket, Rhode Island

The Pawtucket (Rhode Island) Heart Health Program (PHHP) was initiated in 1980; its ten-year goal is to change the cardiovascular risk status of residents in this New England community. The project will examine whether community activation can change CVD knowledge and risk factors and whether changes in risk factors will become manifest as a decline in CVD morbidity and mortality.[15] The town of Pawtucket was chosen because the rate of CVD mortality in the community is above national norms. Pawtucket has a population of approximately 71,000 residents and is a predominantly blue-collar community.

The project is evaluated with biennial random household risk-factor surveys in Pawtucket and a reference city. Continuous surveillance of myocardial infarction and stroke is done in eight community hospitals. During the first four years of the study, approximately 25,000 contacts have been made with Pawtucket area residents; two-thirds of all contacts have been with women. Fifty-five percent of contacts were through SCORS (screening, counseling, referral sessions), whereas only 20 percent of contacts were through group programs. Participation rates showed that blood cholesterol SCORS were the most frequently attended activity. Exercise, blood pressure, and weight loss programs drew roughly similar numbers of participants. The fewest number of participants have been in smoking cessation programs.[16]

### Remaining Issues

A number of community intervention programs have been attempted. Those with analyzable data generally show reduced risk factor prevalences and, in one study, reduced cardiovascular end points. Several issues remain: the development of community interventions programs for dispersed, rural populations or for low economic status inner-city communities; the development of programs using community funds rather than research monies; and the successful integration and continuation of these programs as community services using indigenous staff.

To address the above issues, the Mary Lasker Heart and Hypertension Institute of the New York State Department of Health has initiated an ambitious effort to fund eight community intervention programs. One unique aspect of this program is the wide disparity in the types of communities targeted for intervention. Five will focus on inner-city, economically disadvantaged populations. These concentrated populations are characterized by multiple potential sources of health information. They have large black and Hispanic populations. One other community is a mixture of urban and rural groups; the final two are very rural populations. These latter communities have dispersed, hard-to-reach populations, with fewer sources of health information.

Community intervention materials from the previously described community programs will be adapted to these varied populations. The importance of these programs will be the demonstration of the feasibility of locally identifiable communities organizing and carrying out a sophisticated community intervention without the large-scale financial support for educational material development and evaluation used in the previously described research programs. Such programs will test whether the research results of a number of community intervention programs can be applied quickly and directly to general populations.

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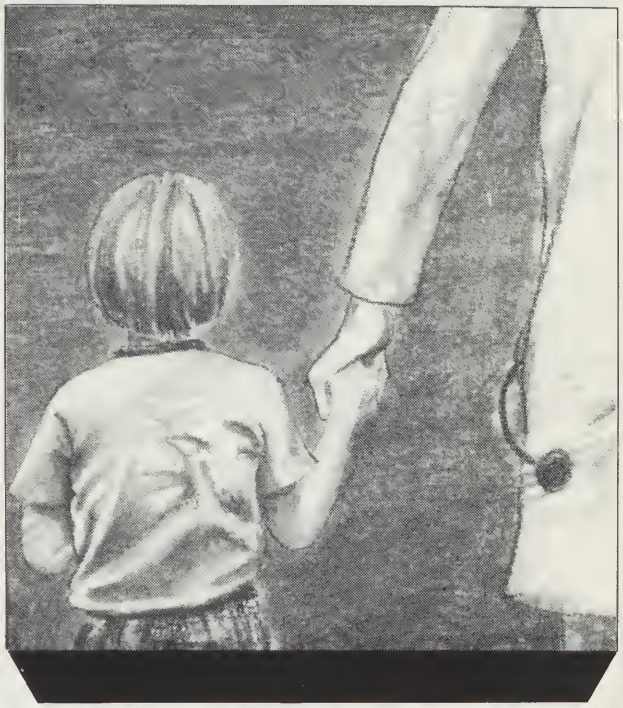

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# Medical Miscellany

## Volunteers Needed forAIDS Helpline

Baltimore City Health Department's Division of Preventive Medicine and Epidemiology is seeking volunteers to staff its new AIDS Helpline. Individuals who are HIV seropositive or who have AIDS are encouraged to apply.

In September the AIDS Helpline began operating on Mondays through Fridays from 9 a.m. to 5 p.m. Volunteers are provided with training, and tokens for transportation are available. For more information or to volunteer, contact Bob Mehl 301-396-1928.

• • •

## JNC IV Available

The National Heart, Lung, and Blood Institute (NHLBI) is pleased to make available *The 1988 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (JNC IV).* The report was released recently by the coordinating committee of the National High Blood Pressure Education Program, a program sponsored by the NHLBI. This is the fourth in a series of reports that have provided physicians and other health professionals with updated therapy recommendations for more than a decade.

*JNC IV* reviews, updates, and expands the 1984 recommendations for controlling hypertension. The new report translates the results of the latest clinical trials to medical practice, addresses the needs of special populations, examines factors that influence the cost of care, and provides additional guidelines for managing high blood pressure in the presence of cariovasular diseases and other coexisting medical conditions. Intended as a guide for practicing physicians and other health professionals in their care of hypertensive patients, *JNC IV* is a reference for those participating in the many community HBP control programs throughout the county. A free copy may be obatined by contacting:

**The National High Blood Pressure**
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**Bethesda, MD 20814**
**301-951-3260**

Area meetings and course announcements are listed each month under *Doctors Take Note*

# Maryland Medical Journal
# Tentative Editorial Calendar - 1989

This is a tentative general listing of topics for 1989. Readers and authors are invited to contribute their articles, comments, and letters to the editor for any issue. All manuscripts are reviewed by the Editorial Board and accepted or rejected on their merits. Publication lead time is approximately three months; for example, for the February issue, copy should be submitted by November 1.

Theme issues will include other unrelated articles; authors are encouraged to submit articles/comments/letters for any theme issue. Dedicated issues will deal with only one topic. MMJ will consider suggestions from readers for issues still open.

| | |
|---|---|
| *January* | **Legislative Update (theme issue)** |
| *February* | **Health Promotion and Disease Prevention in the Care of Older Adults (dedicated issue)** |
| *March* | **open** |
| *April* | **History of Bacteriology (to 1925) and Medical Microbiology (since 1925) in Maryland (theme issue)** |
| *May* | **open** |
| *June* | **International Health Activities in Maryland Institutions (dedicated issue)** |
| *July* | **open** |
| *August* | **Annual Reports (dedicated issue)** |
| *September* | **open** |
| *October* | **Genetics (dedicated issue)** |
| *November* | **open** |
| *December* | **Semiannual Meeting and Reports (theme issue)** |

*When submitting manuscripts for review by MMJ s Editorial Board, please send an IBM compatible floppy disk with the document entered in a Word Perfect, Wordstar, or Multimate program. At your request, MMJ will return your disk after your article is published or if your manuscript is not accepted.*

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# Whose Blood Is Safe?

*ROBERT E. WENK MD*

In the last issue of the *MMJ*, Dr. Ali Daneshvar suggested that fluid replacement was beneficial to autologous blood donors who were elderly, ill, or prone to syncope.[1] Although measurements of blood pressure and pulse rate appeared to indicate decreased cardiovascular stress in these patients, only further studies will indicate whether the frequencies of adverse reactions and donor risks actually are reduced by fluid replacement.

Daneshvar's article raised an interesting issue: how safe is the practice of autologous transfusion when risks of donation are included? Each clinician and blood bank director must evaluate the safety of the autologous donation; there are very few guidelines. After all, the donors are patients, not healthy volunteers. Autologous donors are usually anxious, sometimes pregnant, often elderly, frequently anemic, occasionally medicated, and almost always clinically abnormal in some way. Blood Bank standards[2] for donation require only that hemoglobin concentration is over 11.0 g/dl, that the donor is not bacteremic, and that donation occurs no later than 72 hours prior to surgery. In contrast to the list of requirements for homologous donors, requirements for the growing numbers of autologous donors have not been fully developed. Analysis of a database is needed to determine the risk factors.

> *The safest transfusion is no transfusion. The next safest transfusion is one that is autologous.*

The following commentary will compare some of the risks, benefits, and indications of voluntary, autologous, and directed donor transfusions.

## Homologous Voluntary Donors

A voluntary donor is an unpaid, altruistic provider of human blood. The voluntary blood supply is relatively safe because donors are screened first by history and second by laboratory methods. Neither method alone is sufficient; together they are very effective, but not foolproof. The medical history currently is obtained by confidential questioning before donation. The history serves a second purpose. It reminds donors of forgotten, risky behavior. (Currently, donors are provided opportunities to have their donated blood discarded in secret.)

Chemical and serologic tests are carried out on all donated blood. Laboratory tests include procedures to reduce the spread of acquiring disease caused by non-A, non-B hepatitis; hepatitis B; and human immunodeficiency virus I. The risks of a recipient acquiring each disease from screened blood are about 3/100, less than 1/100, and 1/40,000 respectively.[3-5]

The homologous blood units collected are transfused anonymously to recipients who are never given the identity of their donors. Identification of the donor is traced in confidence by the donor center (for example, Chesapeake Regional Red Cross) *only* if the patient acquires a posttransfusion infectious disease that is discovered and reported by the hospitals. (This is termed a "look-back" program.) Cases of posttransfusion hepatitis and HIV infection are so-traced. If a particular donor is medically judged to be the transmitter of the disease, he/she is not permitted to donate again. Since 85 percent of voluntary blood is donated by people who donate repeatedly, and since most positive screening tests occur among first-time donors (rather than seroconverters), the blood supply is relatively safe and stable.

The community blood supply, donated by many volunteers, provides a large number of units of all blood groups that are then transported to hospitals in the region, minimizing outdating or waste. Some units are phenotyped so that antigen-negative units can be used for patients with antibodies to specific red cell or platelet antigens. A few volunteers are asked to undergo apheresis to provide larger volume components so there is reduced recipient exposure to the potential viruses of many donors. Most units are subdivided into component plasma, cryoprecipitate, platelets, and other products. The limited blood supply (only about 5 percent of the public donates regularly) is thereby expanded and is adequate to treat patients with hypoxia, some of the thrombocytopenias, a variety of coagulopathies, hypovolemia, and other disorders.

## Designated Donors

A directed (designated) donor is one selected by a patient who believes that the donor's blood is safe. All of us, as patients, can be vehement but mistaken about our choices of safe donors.

There are a few medical indications for using directed donors. When a mother delivers a child with alloimmune hemolytic (or thrombocytopenic) disease of the newborn and there is need for immediate transfusion of the child, it sometimes is useful to have the mother donate for her child. If a patient has atypical antibodies to a "public" antigen, there may be family members who lack the antigen and may be able to provide compatible cells. In patients with uncommon hereditary coagulopathies (for example, hemophilia) or acquired diseases, a highly motivated family member may be able to provide sufficient quantities of a blood component to

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sustain life without exposing the patient to the risks of transfusing blood from many donors.

There are several important reasons to avoid directed-donor blood:

1. There is less donor anonymity because only a limited number of people are asked to donate by the patient. The recipient sometimes can identify and blame the donor for injuries sustained in transfusion.

2. The blood units available in the hospital are designated for use by a particular patient and cannot be used by other patients. Units are retained as whole blood units and are not processed into components. Many hospitals do not "cross over" directed units into the homologous blood supply because of the liabilities, workload, and costs. Therefore, the blood is wasted if unused by the recipient for whom it was collected.

3. There is some objective evidence that directed donors are less safe than voluntary donors with respect to transmitting hepatitis (therefore possibly HIV). A reason is that many directed donors are first-time donors who have not been weeded out of the system by look-back programs. It is also possible the history is unreliable when the "volunteer" may have been pressured into donation by a friend or family member.

4. In the case of a female patient of reproductive capability, neither her mate nor his family should donate because of the potential development of posttransfusion alloimmunization and future hemolytic disease of her newborns.

5. Some designees will be of a blood group incompatible with the patient and, therefore, cannot donate directed blood. Nevertheless, each potential donor requires grouping and typing (and further phenotyping if the patient has atypical antibodies), activities that waste the efforts of the blood bank staff and raise costs.

6. There is a worsening shortage of medical technologists, technicians, and nurses in blood banking at a time when there is an increase in workload related to higher inpatient turnover, greater patient acuity, more testing to provide safer blood, and growing need for documentation. Reimbursement constraints, medical and legal risks, and service demands have greatly stressed hospital blood bankers who cannot and should not cope with the largely unproductive work of directed donations.

### Autologous Donors

Practitioners can help by understanding the problems and by relating the issues of transfusion safety to patients in persuasive ways. We should dispel the exaggerated concern about an unsafe voluntary blood supply and discourage patients from designating their own donors. Instead, we should encourage patients to predeposit their own blood in autologous donor programs. Up to about 25 percent of the blood used in elective surgery might be supplied as autologous units. Processing a donor of autologous blood is labor intense, but the product is compatible, cannot cause alloimmunization, rarely causes infection (bacteremia), and it may require fewer tests prior to transfusion (depending on legal and accreditation requirements).

Unfortunately, much of the autologous blood currently donated by patients remains unused or is transfused unnecessarily. Unused units cannot be crossed over into the homologous supply of blood because the donor does not meet the more stringent medical and legal requirements for homologous donors. Unnecessary transfusion is carried out when a patient who would not otherwise receive blood following a procedure is transfused with predeposited autologous blood.

> *In any transfusion, including an autologous one, errors are possible.*

Errors include misidentifying the unit or the recipient, bacterially contaminating the blood at the time of donation, causing the unit to hemolyze or clot by admixture with intravenous fluids (other than 0.9 percent normal saline), storing units improperly, overwarming, and volume overloading the patient, causing embolization. Therefore, a physician or surgeon should not transfuse autologous blood simply because it is available and the patient's hematocrit has decreased. Usually blood loss should be greater than 15 percent of the estimated intravascular volume before a dose of red cells (2 units) should be administered. To reiterate, the safest transfusion is none at all.

### Alternatives to Transfusion

Transfusion of blood components should be carried out strictly according to individual hospital criteria required by the Joint Commission on the Accreditation of Hospitals.

There are many ways to avoid transfusion of red cells. Many single unit red cell transfusions are unnecessary. Medically, it is not usually necessary to immediately transfuse red cells in compensated patients with severe chronic anemias treatable with specific agents (for example, iron). Patients with acute warm autoimmune hemolysis will destroy transfused homologous cells and should not be transfused unless anemia threatens life. In the future, erythropoietin, by stimulating marrow, may be useful in avoiding some medical transfusions. Intraoperative blood salvage and preoperative hemodilution are two means of avoiding homologous red cell transfusions in elective, major surgery. Such "autotransfusion" extends the autologous blood supply.

There is a nationwide overuse of both fresh frozen plasma (FFP) and platelets. Usually it is not necessary to infuse FFP in patients with massive hemorrhage if platelets were administered or if less than five liters of replacement fluids and red cells have been given. FFP should be avoided as a volume expander. Volume replacement may be achieved with crystalloids, colloids, or

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human blood products that do not transmit infection (for example, albumin).

Exposure to platelet donors might be reduced by estimating from patient's blood volume the minimum dose of platelets required. The dose can be adjusted by decreasing the number of platelet donors (from the usual six) in a pool. After transfusion, sufficiency of the administered dose can be determined by measurement of the one-hour (postinfusion) platelet count increment. Platelet administration is not usually necessary in destructive thrombocytopenias (for instance, ITP).

Multidonor pooled products such as antihemophilic factor (AHF , factor VIII) frequently transmit disease. (The frequency of HIV infection is decreasing in AHF because new, safer manufacturing processes are used. Hepatitis transmission is still a problem.) AHF may be avoided by use of cryoprecipitate in some cases of Hemophilia Type A. Mild cases of this disease and many patients with von Willebrand's disease may be treated with desmopressin acetate (DDAVP), which rapidly releases deficient factors into the blood. Recombinant coagulation factors may be available in the future to treat severe hemophilias.

*Modern transfusion practice is not a simple matter. There are many variables to consider: patient (consumer) demands, diagnosis, alternative strategies for treatment, risks, benefits, potential complications, costs. The first question to ask is: Is transfusion necessary?*

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# Transient Ischemic Attacks

*JAMES A. REGGIA MD and STANLEY TUHRIM MD*

**Identification and management of patients with transient ischemic attacks (TIAs) is a difficult clinical problem. Determining the pathophysiology of the transient event may be difficult, but it is crucial in selecting which of several different methods of treatment is to be instituted. Only about 20 percent of people who suffer a TIA will have an ischemic stroke within two years, so diagnostic and therapeutic intervention must be tempered with caution.**

*A 57-year old right-handed lawyer saw his doctor the day after a disturbing event at work. During a meeting he suddenly seemed to lose control of his pen while taking notes. He tried to say something but the sounds he made were unintelligible. He knew what he wanted to say but was unable to do so. His colleagues realized there was something wrong and helped him lie down. He dragged his right leg as he was helped to a nearby couch. His arm hung limply at his side. After lying down for five minutes, strength began to return to his arm. He was able to speak intelligibly. After fifteen minutes he felt perfectly normal but went home and rested the remainder of the day.*

A transient ischemic attack (TIA) is a temporary, focal neurologic deficit secondary to localized ischemia that lasts for less than 24 hours. Although this definition is straightforward, the clinical evaluation and treatment of patients who have TIAs are complex and controversial problems. For example, in one study, 30 percent of the patients originally classified by a physician as having TIAs were reclassified as not having TIAs when their charts were subsequently reviewed by a stroke specialist.[1] Physicians frequently are uncertain about how best to examine and treat TIA patients.[2] Because of the clinical importance of TIAs, their frequent occurrence, the difficulties noted above, and particularly the recent publication of studies with implications for therapy, a review of the assessment and management of TIA patients is especially relevant.

TIAs may cause significant temporary dysfunction and marked anxiety for a patient, but their greatest clinical significance is as a harbinger of ischemic infarction, with its potentially devastating consequences. Estimates of the incidence of infarction following TIA vary, but approximately 5 percent of patients suffering a TIA will have a stroke within a month and 12 percent will do so within a year. At the end of two and five years the estimates are 20 percent and 33 percent respectively.[3] Therefore, the occurrence of a TIA must be recognized, its pathophysiologic mechanism identified and measures instituted that will decrease the patient's risk for stroke.

It is unusual for a patient to be observed by a physician during a TIA. Therefore the diagnosis often is made on the basis of history. A clinician whose patient complains of possible cerebrovascular symptoms must determine if these represent a TIA. Several systemic disorders such as hypoglycemia or cardiac arrhythmias may produce transient cerebral symptoms, *but these are rarely focal.* Nonspecific dizziness, lightheadedness, syncope, confusion, or transient memory disturbance should not be considered as focal symptoms. Isolated vertigo also is not usually caused by focal cerebral ischemia. In making the diagnosis of a TIA the physician should require a history of definite focal findings such as aphasia, amaurosis fugax, or hemiparesis and attempt to place these symptoms in either the carotid or vertebrobasilar system. Typical TIA symptoms and their localizations are listed in Table 1.

**Table 1. Some Symptoms of TIA**

| |
|---|
| **Carotid System TIA** |
| Unilateral hemiparesis* |
| Unilateral sensory complaints* |
| numbness |
| paresthesia |
| Aphasia |
| difficulty speaking |
| difficulty comprehending written or spoken language |
| Amaurosis fugax (monocular visual loss) |
| **Vertebrobasilar System TIA** |
| Binocular visual disturbance |
| Homonomous hemianopsia** |
| Any combination of |
| diplopia |
| vertigo |
| dysarthria** |
| dysphagia |
| ataxia |
| Bilateral motor or sensory deficit |

* may be seen in vertebrobasilar system disease
** may be seen in carotid system disease

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Transient focal deficits may be caused by neurologic disorders other than focal ischemia secondary to arteriosclerotic changes. A careful history and physical examination can suggest the presence of these disorders. A throbbing unilateral headache occurring after the focal deficit has disappeared or improved, the presence of scintillating scotomata, accompanying nausea, and a family history suggest migraine, especially in younger patients. Some transient neurological deficits associated with migraine in younger patients may be followed by stroke.[4] Preceding clonic motor activity, abrupt loss of consciousness, postictal confusion, or a previous history of epilepsy or traumatic brain injury suggest the possibility of a seizure. A recent history of headache, a clouded sensorium or depressed level of consciousness, or recent head injury suggest a subdural hematoma. These may occur without any preceding head injury, especially in the elderly.

*Based upon a history from the patient described above, the physician inferred that the symptoms were referable to the left middle cerebral artery distribution, suggesting a lesion in that artery or more proximally in the left internal carotid artery. Upon further questioning, the patient described no associated factors suggestive of migraine, seizure, etc.*

**Pathogenesis**

Once the physician is convinced that the patient has suffered a focal ischemic event, the question becomes, What caused it? Ischemic stroke or TIA is usually caused by one of two mechanisms: primary occlusion of an artery supplying the brain parenchyma or embolism of material from a distant source. Primary occlusion generally is thought to be due to in situ thrombosis of a vessel already narrowed by atherosclerotic plaque. Occlusion of small penetrating arteries, producing either transient dysfunction or lacunar infarction of the deep white matter, is associated with hyaline thickening of the vessel wall and may not require thrombosis formation. Although systemic hypotension rarely produces focal symptomatology, hemodynamic obstruction of a cerebral artery may produce a decrease in regional blood flow sufficient to cause dysfunction. At least a 70 percent reduction in the diameter of the cervical carotid artery is required to produce distal hemodynamic impairment. However, the presence of high-grade stenosis or even occlusion does not necessarily produce symptoms, since adequate collateral circulation may exist. Hemodynamic symptoms also may be caused by identifiable stenosis of other cerebral arteries or, rarely, the subclavian arteries.

Artery-to-artery emboli of necrotic material from an ulcerative atherosclerotic plaque, or from platelet thrombi forming at such a site, may give rise to transient or permanent symptoms when they lodge more distally. The most common location for such plaque formation is at or near the origin of the internal carotid artery. Therefore, atherosclerotic plaques may be clinically significant without directly producing hemodynamic compromise of distal brain parenchyma.

Cardiogenic emboli associated with valvular or nonvalvular atrial fibrillation, acute myocardial infarction, adynamic wall segments following infarction, cardiomyopathy, mitral stenosis, or prostheses are well known causes of TIA and stroke. Mitral valve prolapse, at least in younger patients, is also associated with cerebral symptoms, possibly on an embolic basis. Occasionally, septic emboli will originate from a diseased endocardium. "Paradoxical" emboli originating in the lung or venous system and traveling through a patient foremen ovale may also occur.

The role of vasospasm in producing TIA and stroke has not been fully determined. It would appear to play an important role in the focal deficits following subarachnoid hemorrhage and also may be important in the focal deficits associated with migrainous attacks and amphetamine abuse.

Distinguishing among the possible mechanisms in an individual patient on the basis of TIA characteristics is very difficult. It is helpful to note that transient hemispheric symptoms lasting more than an hour are not likely to be associated with carotid stenosis and therefore probably are due to cardiogenic emboli.[5] The occurrence of hemispheric symptoms and ipsilateral monocular blindness at separate times in the same person is suggestive of hemodynamically significant ipsilateral carotid stenosis.[5] Determining the pathophysiology of the transient event may be difficult but is crucial in determining the type of treatment to be instituted. In particular, while the majority of TIAs result from atherosclerotic vascular disease or cardiac disease, uncommon causative or aggravating factors should be kept in mind, particularly in the younger patient who is less likely to have atherosclerosis (Table 2).

TIA and stroke tend to occur in the setting of identifiable risk factors, the foremost treatable one of which is hypertension. The recent decline in the incidence of stroke has been shown to parallel the treatment of hypertension.[6] Less well documented, but also treatable risk factors include cigarette smoking, alcohol abuse, hypercholesterolemia, hypertriglyceridemia, and use of oral contraceptives, particularly in conjunction with

cigarette smoking or advanced age. Diabetes mellitus is also a risk factor for stroke, but there is no definitive evidence that any mode of its treatment diminishes the risk of stroke.[7]

*The patient described above had a family history of stroke at a young age but no other known risk factors.*

### Clinical Evaluation

The clinical evaluation of the patient with TIAs begins with the history and physical examination. This enables the physician to document the absence of permanent neurologic dysfunction, identify risk factors and contributing diseases, and discover possible etiologies. Physical examination should include careful cardiac auscultation, auscultation for cervical bruits, inspection of retinal vessels for embolic material, palpation of peripheral pulses, and blood pressure determinations in both arms. Blood should be obtained for a complete blood count (including quantitative platelet count), erythrocyte sedimentation rate, prothrombin time, activated partial thromboplastin time, serum cholesterol, triglycerides, electrolytes and glucose, liver and kidney function tests, and VDRL. A chest x-ray, electrocardiogram, and CT scan (preferably with contrast enhancement) should be obtained. Echocardiography should be obtained in patients under 45 or in whom there is some evidence of cardiac disease. In others the diagnostic yield is vanishingly small.[8] Holter monitoring also should be employed in selected cases. Evidence of systemic disease should be pursued with the appropriate studies.

*The patient described above had a normal physical examination and laboratory tests were within normal limits. Holter monitoring and echocardiography were not performed.*

Further evaluation depends on the information obtained to this point. If the patient has a clear-cut cardiac source for embolus, anticoagulation is usually indicated. If the patient clearly has only vertebrobasilar symptoms or is not considered a candidate for endarterectomy, no further evaluation is necessary and antiplatelet therapy should be instituted (see below). If the symptomatology is in the carotid distribution and the patient is an operative candidate, further evaluation of the carotid arteries is warranted. Patients with lacunar infarctions and a history of hypertension may be an exception to this. In that situation the likelihood of finding a culpable carotid lesion is small. These patients probably should be treated with aspirin and antihypertensives and not subjected to the risk of angiography. In those patients for whom further evaluation is indicated, the tests used depend on which are available in a given location.

If reliable noninvasive carotid artery evaluation is available, this is the preferable first step because of its negligible risk. A myriad of noninvasive tests have been used in recent years, but many have been discarded in favor of a few more reliable techniques now commonly available.

Oculoplethysmography (OPG) is used to measure systolic ophthalmic artery pressure.[9] The pressures in the ophthalmic arteries can be compared to one another and to the ipsilateral brachial artery pressure. This test gives an indication of the hemodynamic status of the first major branch of the internal carotid artery and is thought to mirror the status of the proximal intracranial carotid circulation. In conjunction with the OPG, supraorbital directional Doppler analysis can be used to monitor the direction of blood flow in the superficial or-

**Table 2. Disorders Occasionally Associated with TIA**

**Genetic Disorders**
- Homocystinuria
- Fabry's disease
- Sickle cell anemia

**Nonatherosclerotic Vasculopathies**
- Infectious arteritis (especially syphilitic)
- Giant cell arteritis
- Granulomatous arteritis
- Polyarteritis nodosa
- Lupus arteritis
- Rheumatic arteritis (or other connective tissue disorders)
- Arteritis associated with amphetamine use
- Takayasu's disease
- Moya-moya disease
- Radiation vasculopathy
- Thrombotic thrombocytopenic purpura
- Fibromuscular dysplasia
- Spontaneous or traumatic dissections
- Amyloid angiopathy

**Hematologic Disorders**
- Polycythemia
- Thrombocytosis
- Leukocytosis
- Anemia
- Lupus anticoagulants
- Antithrombin III deficiency
- Platelet hypercoagulability
- Dysproteinemia
- Protein S or protein C disease
- DIC

bital circulation. A reversal in the usual direction of flow may be seen in internal carotid occlusion. Obviously, in this setting the OPG will not reflect the hemodynamics of internal carotid blood flow.

Direct evaluation of the internal carotid at and near its origin can be accomplished by ultrasound evaluation. Two methods of evaluation are possible, and in newer machines they can be accomplished with the same probe. The B-scanner produces an instantaneous image of the carotid vessel walls. This is useful both to visualize areas of stenosis and plaque formation and to position the probe for Doppler analysis of the wave form based on data related to flow velocity. This enables evaluation of flow at a known position within the artery, eliminating a major source of previous error. These tests have limitations as well. Calcification may absorb ultrasound waves and obscure the carotid bifurcation; flow may be too slow to produce a detectable Doppler shift. However a battery of such tests is a sensitive and specific way to evaluate the possibility of a hemodynamically significant lesion or to locate an atherosclerotic plaque that may be the source of artery-to-artery embolus. Noninvasive testing may be carried out (without risk) in patients who are not considered surgical candidates, but the results may have little effect on therapy.

If reliable noninvasive testing is unavailable, or if the results suggest an operative lesion, angiography may be performed. Some institutions advocate the use of computer-enhanced intra-arterial digital subtraction angiography. It remains to be seen if this method supplants conventional angiography. Whichever method is chosen, adequate evaluation of the relevant intracranial, as well as extracranial, vasculature is essential. Operating on a 60 percent stenosis of the cervical internal carotid is of little value in the face of an occlusion of the intracavernous carotid. Intravenous digital subtraction angiography may not adequately visualize intracranial vessels or produce as well-defined pictures of extracranial vessels as do intra-arterial studies, and may be less safe.[10] The risk associated with this technique makes it a poor choice as an initial screening procedure. Operative candidates probably are better served by proceeding directly to arteriography if adequate noninvasive screening is unavailable.

*The patient we have described was scheduled for noninvasive testing which revealed some narrowing ( <50 percent) at the origin of both internal carotid arteries. Since this was not believed to be hemodynamically significant, no arteriography was performed.*

## Treatment

Treatment indicated for any underlying or contributing disease should be instituted (for example, pheresis for erythrocytosis or leukocytosis). Hypertension should be corrected. Birth control pills should be stopped and another method substituted. Smokers should be forcefully encouraged to abstain. More specific therapy of the TIA patient is controversial. Only one large randomized trial comparing endarterectomy to medical management has been performed.[11] It is methodologically imperfect and outdated because both medical and surgical therapy have advanced in the 20 years since the study was done. New studies of endarterectomy are under way. The available medical therapies have been examined more closely, but many questions remain. Therefore treatment decisions must be based on the available resources and common sense.

The generally accepted treatment for patients whose symptoms are due to nonseptic cardiogenic emboli is long-term anticoagulation. Guidelines for anticoagulation of cardiogenic embolic strokes have recently appeared.[12] The prothrombin time should be monitored regularly as should the stool and urine for occult bleeding. A prothrombin time of 1.5 times control is less hazardous than are greater levels of anticoagulation and appears to be as effective in preventing infarction.[13] In patients who continue to have symptoms, an antiplatelet agent such as dipyridamole (150-225 mg daily) may be added, although convincing evidence of its effectiveness is lacking.

Aspirin 650 mg twice daily has been demonstrated to decrease the incidence of stroke following TIA and minor stroke by about half.[14] Further, there is recent evidence that those TIA patients treated with aspirin who have strokes suffer less severe strokes than untreated patients.[15] The decreased stroke incidence is more prominent in men but has been shown in women as well.[16] Therefore, this treatment can be recommended in any patient with TIAs not resulting from a cardiac embolic source. There is both theoretical justification and recent empirical evidence[17] that a smaller dose of 325 mg daily is just as effective in stroke prevention and is better tolerated. Some physicians therefore have switched to this lower dose. Other platelet inhibiting drugs such as dipyridamole and sulfinpyrazone have been advocated as adjuncts to aspirin but appear to have no significant clinical effect.[14,18]

Long-term anticoagulation with coumadin is probably also effective in preventing ischemic stroke,[19] but its use is much riskier and more expensive than aspirin. Coumadin is best reserved for use in patients with TIA due to cardiac emboli and for those who continue to be

symptomatic on aspirin or cannot take aspirin. In patients without a cardiac embolic source, long-term anticoagulation probably should be limited to six months because after this time the risk of complications outweighs the risk of infarction.[19]

Selecting patients for endarterectomy is particularly problematic since its efficacy in any group has not been adequately demonstrated. It would appear that the long-term stroke-free survival of patients with hemodynamically significant lesions of an internal carotid artery and symptoms referable to that same carotid is increased by endarterectomy.[20] There is nothing but anecdotal information that any other group of patients (for example, patients with left hemisphere symptoms but right carotid disease) benefit from surgery. Additionally, it has been estimated, based on the Joint Study of Extra-arterial Occlusion,[11] that the "acceptable risk" for morbidity of angiography and surgery should be under 3 percent.[21] In practice this is rarely realized, and there are disturbing indications that endarterectomy is being substantially overused.[22,23] In fact, recently the overall morbidity and mortality resulting from endarterectomy in the United States has been calculated to be at least 10 percent.[24] Therefore it is our opinion that patients with what is judged to be a hemodynamically significant stenosis of an internal carotid and symptoms referable to the hemisphere it serves may be candidates for endarterectomy in an institution where the perioperative morbidity and mortality approaches 3 percent. The ideal candidate is relatively young with no other significant medical conditions (especially diabetes or ischemic heart disease) that increase the risk of angiography and surgery.

Patients who receive an endarterectomy (and those who do not) should be treated with aspirin. Patients who continue to be symptomatic on aspirin may be considered for endarterectomy if they have a surgically accessible lesion that, though narrowing the lumen less than 75 percent, is judged to be the source of their symptoms. Patients who do not respond to aspirin and either have an inaccessible lesion or are not surgical candidates may be anticoagulated at a prothrombin time 1.5 times control. There is little reason to consider operating on the "asymptomatic" or contralateral carotid except in unusual circumstances. Patients with bilateral carotid symptoms, a combination of carotid and vertebrobasilar symptoms or complex vasular pathology must be considered individually and may benefit from consultation with a stroke specialist.

Patients with complete occlusion of the internal carotid artery are not considered candidates for endarterectomy because the patency rate following operation is low. For these patients and those with inaccessible carotid or middle cerebral artery stenosis, bypass of the obstruction by anastomosis of a branch of the external carotid to the distal middle cerebral artery (EC/IC bypass) was considered in the past to be an alternative, in an analogy with cardiac bypass surgery. A recently completed international cooperative study assessed the effects of this procedure plus appropriate medical management in a randomized comparison with medical management alone. In the group as a whole and in each of the clinically relevant subgroups no advantage for surgical therapy was demonstrated. The authors concluded that there was no indication for the EC/IC bypass procedure.[25]

Unusual patients with an intraluminal thrombus identified on angiography often have been treated with emergency endarterectomy. However, a recent retrospective study suggests that such patients are at increased risk for perioperative stroke and should not undergo emergency surgery.[26] Prompt anticoagulation can be used instead and may result in angiographic resolution of the clot with no deterioration in the patient.[26] Further study is needed to determine the optimal management of patients with an intraluminal thrombus.

Any discussion of TIAs calls to mind the issue of the asymptomatic carotid bruit. Population-based studies of the relationship of carotid bruit to stroke show no increased incidence of ipsilateral ischemic stroke. In the largest study the overall stroke rate for persons with bruit was twice that of those without, but half were on the contralateral side due to cardiogenic embolism or nonischemic events.[27] A similar lack of relationship was discovered in patients with asymptomatic bruit undergoing vascular surgery. In this study there was no increased incidence of stroke in the bruit group.[28] Since endarterectomy is of questionable value in the symptomatic patient it does not seem reasonable to subject the asymptomatic individual to the possible morbidity of angiography and endarterectomy until the benefit of such a procedure has been demonstrated adequately. While the risk of surgery in these patients on the average probably is less than in symptomatic patients, the rationale is dubious. If there are no contraindications, prophylactic treatment with aspirin would seem the much more benign (though perhaps unnecessary) alternative.

### Long-Term Monitoring

Patients whose ischemic symptoms have been successfully treated by medical and/or surgical therapy should be seen at three-month intervals for the first year and at least annually thereafter to monitor for recurrent

symptoms, medication side effects, and the (re)development of hypertension. The development of bruits, especially in a previously operated artery, should be noted. Patients with carotid lesions should have noninvasive carotid evaluations semiannually.

Anticoagulated patients need at least monthly monitoring of their prothrombin time once their dose has been stabilized. The introduction of numerous medications may alter a patient's response to a given dose and may necessitate more frequent monitoring. After six months, warfarin should be tapered and, if no symptoms recur, aspirin should be substituted (unless cardiogenic emboli are suspected, in which case lifelong anticoagulation may be appropriate).

*The patient we described was placed on aspirin 650 mg bid. He had a second, milder episode the day after being placed on aspirin but none thereafter. Repeat noninvasive evaluation at six months revealed no change in his carotid bifurcation disease.*

## Conclusion

TIA is best thought of as a warning sign both of stroke and usually of the more fundamental problem of atherosclerosis. However, its value should not be overstated, and it should be recognized that nonspecific transient neurologic deficits may at times be benign.[29] Perhaps only 10 percent of patients who suffer strokes note transient symptoms prior to their strokes.[7] Therefore identifying patients with TIAs alone will not eliminate the problem of stroke. Conversely, since only about a third of people who have TIAs go on to ischemic strokes within five years, even without any systematic treatment, TIA should not be considered the harbinger of doom. Nevertheless, the accurate identification of patients with TIAs and their proper management can be life saving. The amelioration of risk factors such as hypertension and treatment of underlying disease, if present, is at least as important as any specific therapy. The specific treatments available are varied, but the wise physician always takes a cautious approach to any potentially dangerous intervation: *primum non nocere*, first do no harm.

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# * * * IMPORTANT * * *

## MARYLAND LAW REGARDING NOTICE OF PARTICIPATION IN THE MEDICARE PROGRAM

On July 1, 1985 a law was passed in Maryland requiring physicians to post a notice in their offices regarding their participation status in the Medicare program. It has been brought to our attention that some physicians are not complying with this law. Therefore, Med-Chi has developed the signs on the next 3 pages for your use. The appropriate sign should be detached and posted in your office.

The law, which is outlined in Section 14-705 of the Health Occupations Article of the Annotated Code of Maryland, states:

> If a physician is engaged in the private practice of medicine in this State, the physician shall display a notice written in English that is plainly visible to patients in the office of the physician concerning whether the physician:
> (1) Is a participating physician under the Medicare program and, therefore, accepts assignment for all Medicare claims;
> (2) Accepts Medicare assignment on a case-by-case basis; or
> (3) Does not accept Medicare assignment in any case.
>
> This requirement DOES NOT apply to a physician or group of physicians who:
> (1) Have exclusive contracts with a health maintenance organization;
> (2) Treat only the patients of the health maintenance organization; and
> (3) Agree to accept full assignment for covered services rendered.
>
> **A PERSON WHO VIOLATES ANY PROVISION OF THIS LAW IS GUILTY OF A MISDEMEANOR AND ON CONVICTION IS SUBJECT TO A FINE NOT TO EXCEED $5,000 OR IMPRISONMENT NOT EXCEEDING 5 YEARS OR BOTH.**

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**If you have any questions about this matter, contact the Med-Chi Government Relations Department at 539-0872 or 1-800-492-1056.**

# For My Medicare Patients

## I PARTICIPATE IN THE MEDICARE PROGRAM
## AND
## ACCEPT ASSIGNMENT FOR ALL MEDICARE CLAIMS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.

_____

Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

# For My Patients

## I ACCEPT MEDICARE ASSIGNMENT ON A CASE-BY-CASE BASIS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.



Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

# For My Patients

## I DO NOT ACCEPT MEDICARE ASSIGNMENT IN ANY CASE

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.




Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

# Festschrift Honoring the Medical Career of Thomas B. Connor MD



On Friday, November 13, 1987, the Department of Medicine of the University of Maryland School of Medicine celebrated a day in honor of Thomas B. Connor, Professor of Medicine and Chairman of the Division of Endocrinology. A small series of scientific papers were presented by former associates and Fellows who had trained under Dr. Connor.

Following his graduation from the University of Maryland School of Medicine in 1946, Dr. Connor trained in Medicine at the Mercy Hospital and progressed through the ranks to Chief Medical Resident. Following this valuable experience, Tom Connor trained under John Eager Howard MD at the Johns Hopkins Hospital. This provided him with a unique opportunity that culminated in a remarkable scientific association with Dr. Howard, one of the leading US experts in the field of endocrinology and metabolism. A lifelong friendship followed. During these important years in training, Dr. Connor was associated with Edmund R. Yendt MD, William C. Thomas MD, and John

G.Wiswell MD. Without question, this particular group of medical scientists represented one of the leading centers in the field of calcium metabolism, hypertension and its relationship to unilateral renal disease, and renal stone formation.

In 1956, Tom Connor joined the Department of Medicine of the University of Maryland where he established and directed a new Division of Endocrinology/Metabolism. Here, associated with his dear friend John G. Wiswell and under their guidance, a strong teaching, research, and patient care program developed. Indeed, its numerous Fellows and trainees have achieved success in their own right and have made notable contributions not only in the United States but also abroad.

As a tribute to Dr. Connor, a Festschrift was held in the Frank C. Bressler Research Building of the University of Maryland School of Medicine. Many of Dr. Connor's former Fellows and friends attended this happy meeting. Dr. Yendt, Chairman of the Division of Endocrinology, Queens University School of Medicine, presented a strikingly interesting paper on nephrolithiasis with emphasis upon hyperoxaluria and "idiopathic" calcium oxalate stone formation.

In a related field, William C. Thomas, Jr., MD, Professor of Medicine, Division of Endocrinology/Metabolism, University of Florida, Gainesville, described those historical events that led to the demonstration of how inhibitors in urine interfere with the solidification of cement. This observation led to use of cement as a test medium. Initially, he had observed that urine of patients with calcareous renal calculi resulted in mineralization of the matrix of rachitic rat cartilage. He recounted the important studies that helped clarify how inhibitors in urine function in formation of crystalline calcium salts.

Dr. T. Kenny Gray, Vice-Chairman, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, spoke of how estrogens may inhibit bone resorption. Utilizing cell culture techniques, Dr. Gray showed that estradiol acts directly on osteoblastic cell lines and described how lymphokines stimulate osteoclast precursors. His studies may well clarify abnormalities of bone formation and demineralization.

In a final paper, William A. Valente MD, Director of the Thyroid Unit, University of Maryland Hospital, presented a clear description of how antibody formation correlates with clinical manifestations in patients with Graves'disease. This paper, based on some of Dr. Valente's personal contributions, represents much progress and understanding of the pathogenesis of Graves' disease based on abnormal antibody formation.

This collection of papers will provide the reader with new understanding of old problems and will serve to demonstrate that clinically oriented research is very much alive. They are a fitting tribute to Dr. Connor who, in his quiet, most effective, and productive way, has not only made important contributions in his own right but also has served as a stimulus for many others.

Our personal association extended over three decades. Tom Connor has been fully dedicated to his life as an academician. Never one to shirk responsibilities, he has accepted with enthusiasm and grace all assignments to serve as attending physician for medical students and house officers, to conduct seminars and teaching sessions, to lecture at Medical Grand Rounds, and to serve on various administrative committees. No one has been more effective than Tom Connor in the teaching and counseling of medical residents and Fellows during their training in endocrinology. He was especially meticulous in his investigative studies and the rendering of care to his patients.

*THEODORE E. WOODWARD* **MD**
**Professor of Medicine EmeritusUniversity of Maryland School of Medicine**

# Hyperoxaluria in Idiopathic Calcium Oxalate Nephrolithiasis

*EDMUND R. YENDT MD*

It is appropriate to begin by referring to something that Dr. John Eager Howard said about stones 25 years ago. Dr. Howard was a person whom Tom Connor admired as a physician, a scientist, and a man; his influence on all our careers was profound. Dr. Howard's words have bearing on what I say today. In his lecture, "Urinary Stone," given in Toronto at the Annual Meeting of the Royal College of Physicians and Surgeons of Canada in 1962,[1] Dr. Howard's opening remarks were

> Our barber and later surgical colleagues have made great strides in the technical elegance of removing stones once formed; but in the approaches to the matter of why the stone formed in the first place, emphasis has been directed almost exclusively toward theories of supersaturation and chemical precipitation of single chemical salts.
> Furthermore, only about 5 percent of our patients and not all of Pyrah's large group of patients with calcium oxalate or phosphate stones have an excess of calcium in the urine above the average normal. If these simple chemical situations previously alluded to, namely increase in chemical pressure toward precipitation or crystallizing out of salts from supersaturated solutions are the cause of stones, why indeed don't we all have stones, for circumstances promoting these conditions are common occurrences in the lives of every one of us.

This was the line of reasoning that prompted Dr. Howard, aided by Bill Thomas, to pursue the quest for substances in urine that would inhibit the formation, growth, and aggregation of the crystalline components of stones. The ensuing story of that search is a long saga of frustrating, difficult, and prolonged research that eventually led to important and fundamental discoveries.[2]

But I address the point that Dr. Howard more or less dismissed in his lecture: the question of supersaturation of urine with the crystalline components of a stone. When discussing urinary supersaturation, Dr. Howard referred only to urinary calcium concentration. There was no reference to urinary oxalate concentration because oxalate metabolism at that time was a neglected aspect of investigation: analytical procedures for measuring urinary oxalate left much to be desired. In recent years methodology has improved greatly, and a sizable body of knowledge concerning oxalate metabolism in nephrolithiasis has developed. Three important fundamental observations have been made.

1. Urine of patients with "idiopathic" calcium oxalate stones tends to be more highly supersaturated with calcium oxalate than that of normal subjects, the degree of supersaturation frequently exceeding the "formation product," the activity product of calcium oxalate beyond which spontaneous crystal formation occurs.[3]
2. Oxalate concentration is relatively more important than calcium concentration in influencing the degree of urinary supersaturation with calcium oxalate.[4]
3. Although the excessive urinary calcium oxalate supersaturation of stone patients is partly due to the hypercalciuria, so frequently seen in these patients, it is now apparent that increased urinary oxalate excretion also may be a factor contributing to urinary supersaturation with calcium oxalate.

## Oxalate Metabolism

Before reviewing the prevalence and causes of hyperoxaluria in stone patients, a brief review of oxalate metabolism is in order. Oxalic acid, a dicarboxylic acid, is a useless end product of metabolism with no known function in humans. Its immediate precursor, glyoxylic acid, is a highly labile reactive substance that readily undergoes oxidation to oxalate through the actions of enzymes primarily designed for other purposes, for example, lactic dehydrogenase, xanthine oxidase. There are three main precursors of glyoxylic acid, namely glycine, glycolic acid, and $\alpha$-keto-$\gamma$-hydroxyglutarate.

When the glyoxylate pool is expanded, there appears to be a concomitant increase in the glycolate pool. Thus, increased endogenous oxalate production through the glyoxylate pathway results in increased urinary excretion of glyoxylate and glycolate as well as oxalate.[5] Because of its high reactivity, urinary glyoxylate is not easily measured, but good methods are available for measurement of urinary glycolate. The enzymatic defect in type I primary hyperoxaluria is a deficiency of the transaminase activity responsible for the conversion of glyoxylate to glycine.[6] Pyridoxal phosphate is an essential cofactor for this transaminase activity thereby explaining why pyridoxine deficiency per se may result in hyperoxaluria[7] and also why treatment with vitamin B-6 is effective in some patients with type I primary hyperoxaluria.[8]

According to classical concepts, about 40 percent of urine oxalate is derived from metabolism of glycine, another 40 percent is derived from metabolism of ascorbate, only 15 percent is derived from oxalate in the diet, and 5 percent from other sources.[9] However, when dietary oxalate is increased, a considerably greater

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**Table. Hyperoxaluria in Nephrolithiasis**

I. Normal Urine Glycolate
  1. Increased dietary oxalate
  2. Hyperabsorption of dietary oxalate
    (a) dietary calcium restricted
    (b) hyperabsorption of dietary calcium
      absorptive hypercalciuria
      enteric hyperoxaluria
  3. Increased vitamin C intake
  4. Primary hyperoxaluria, type II

II. High Urine Glycolate
  1. Pyridoxine deficiency
  2. Primary hyperoxaluria type I
  3. Mild metabolic hyperoxaluria

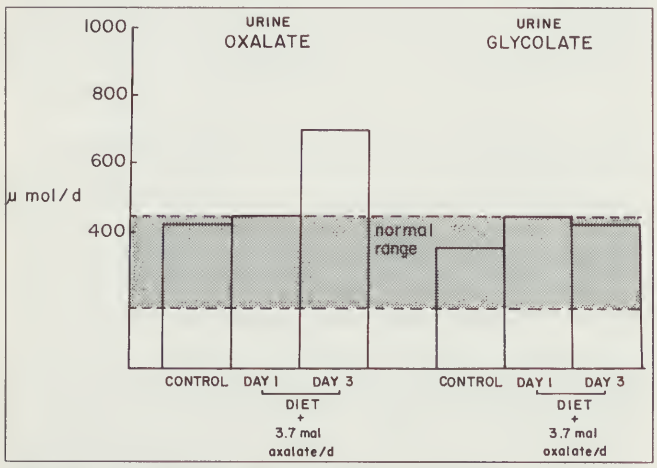



**Figure 1.** Urinary oxalate and glycolate excretion in a patient with calcium oxalate nephrolithiasis who was in the habit of drinking a "cocktail" consisting of rhubarb juice and ginger ale, which contained 3.7 Mmol oxalate. There was a marked rise in urinary oxalate on the third but not on the first day of the high oxalate intake. Urinary glycolate excretion remained normal.

proportion of the urinary oxalate is derived from oxalate in food.[10]

Although most workers report that urinary oxalate excretion tends to be higher than normal in stone patients,[11-16] there is not universal agreement on this point.[17,18] Therefore, to determine the prevalence of hyperoxaluria in stone patients, my associate, Dr. Moussa Cohanim, and myself have compared urinary oxalate excretion measured by the method of Hallson and Rose[19] in 99 consecutive, untreated, nonhospitalized male patients with idiopathic calcium oxalate stones (eating their usual, self-selected diets) with 33 normal male subjects under the same conditions.

Mean 24-hour urine oxalate excretion was $32.9 \pm 11.3$ mg (mean $\pm$ SD) in the stone patients compared to $29.6 \pm 8.4$ mg in the normal men. Twenty-four hour urine oxalate excretion was significantly higher than normal ($35.0 \pm 10.4$ mg ($p<0.025$) in the 34 patients in the group who were hypercalciuric (urine calcium >350 mg per 24 hours) whereas the value for the 65 normocalciuric patients ($31.9 \pm 11.7$ mg) did not differ significantly from normal. Twenty-one of the 99 patients had hyperoxaluria defined as 24-hour urine oxalate excretion in excess of 40.5 mg (450$\mu$ mol) whereas only 2 of the 33 normal male subjects had hyperoxaluria.

## Increased Oxalate Excretion

The possible causes of increased urinary oxalate excretion in stone patients are listed in the Table. Increased dietary intake of foods with a very high oxalate content such as rhubarb, spinach, beets, chocolate, and nuts may lead to hyperoxaluria. We found that one patient developed frank hyperoxaluria after drinking home-prepared rhubarb juice as was his habit (Figure 1). Reduction of the intestinal luminal ionic calcium concentration also may produce hyperoxaluria by facilitating the hyperabsorption of dietary oxalate.[20] Thus restriction of dietary calcium may lead to increased urine oxalate excretion. We found that 5 of 21 patients developed hyperoxaluria after milk and milk products had been eliminated from the diet for one week (Figure 2).

This observation may partially explain why the still-common practice of restricting dietary calcium in stone patients tends to be ineffective, a conclusion we reached many years ago. It has been our practice not to advise low-calcium diets in stone patients but rather normalization of dietary calcium intake when the dietary calcium intake is excessively high. Hyperabsorption of dietary oxalate also may result from hyperabsorption of dietary calcium as in absorptive hypercalciuria.[21] We have reported an extreme example of hyperoxaluria as-

sociated with hyperabsorption of dietary calcium that responded to thiazide administration.[22]

We recently completed a study designed to assess endogenous oxalate production in patients with idiopathic calcium oxalate stones by measuring their urine glycolate excretion. Increased urinary glycolate excretion generally is considered to be indicative of increased endogenous oxalate production. The patients selected for the study included those with hyperoxaluria (urine oxalate exceeding 40.5 mg or 450 μmol per 24 hours) investigated in our clinic since 1980 (a total of 31) as well as 43 patients selected at random with normal oxalate excretion. The 24-hour urine specimens were collected in nonhospitalized patients eating their usual self-selected diets. Urinary glycolate excretion was increased (>34 mg or 450 μmol per 24 hours) in 21 of the 74 patients (28 percent). There were highly significant positive correlations between urinary glycolate and urinary uric acid, urinary creatinine, urinary calcium, urinary phosphate, and body weight. There was also a negative correlation with age. However, when we examined the relationship between these variables by multiple linear regression, urinary uric acid proved to be the only significant predictor of urinary glycolate.

The cause of the increased urinary glycolate excretion in our patients has not been firmly established. The correlation between urinary glycolate and uric acid suggested that dietary purine and/or protein is known to increase the requirements for vitamin B-6,[7] and one possibility we explored was that increased endogenous oxalate production might result from mild vitamin B-6 deficiency produced by excess dietary protein. Long-term studies in three patients with increased urinary glycolate excretion suggest that this possibility is highly unlikely. In these patients, the administration of increasing doses of pyridoxine ranging from 25 to 200 mg per day did not produce a significant decrease in urinary glycolate or oxalate excretion. Preliminary studies suggest that restriction of dietary animal protein may correct this abnormality. Additional studies are necessary to determine the exact relationship between diet and oxalate metabolism.

Until recently, the demonstration that urine glycolate excretion was increased in hyperoxaluric patients was considered to be the most direct method for the diagnosis of type I primary hyperoxaluria in the absence of pyridoxine deficiency.[5] However, it is unlikely our patients have type I primary hyperoxaluria for a number of reasons, including onset in adult life, the intermittent nature of the disorder, the response to dietary protein restriction, and the lack of response to pyridoxine. Furthermore, in our patients urinary glycolate excretion usually exceeds urinary oxalate excretion

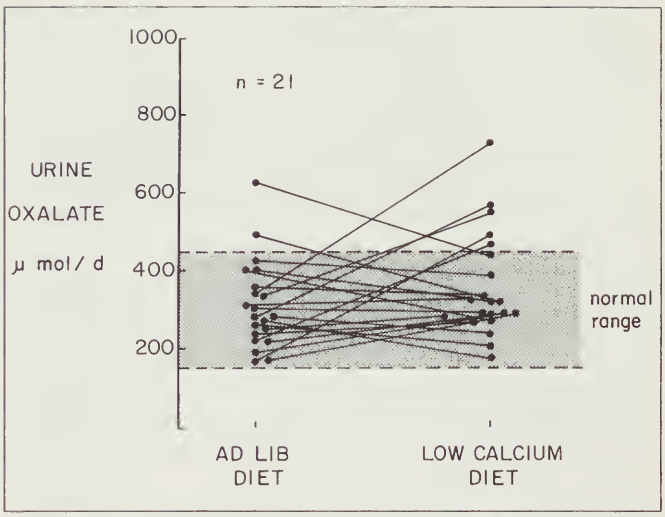



**Figure 2.** Urinary oxalate in 21 out-patients with calcium oxalate stones initially (while eating their usual diets) and again after one-week restriction of calcium-containing dairy products. In the 19 patients whose urinary oxalate initially was normal, urinary oxalate became elevated in 5 but remained normal in 14. However, in the 2 patients whose urine oxalate initially was elevated, values fell to normal with dietary restriction, possibly because the dietary modification may have involved restriction of protein as well as calcium.

whereas the reverse is true in type I primary hyperoxaluria.

The metabolic abnormality in our patients with increased urinary glycolate excretion may be similar to that recently described by Gill and Rose as "mild metabolic hyperoxaluria" in 14 patients who had mild hyperoxaluria associated with increased urine glycolate.[23] In their patients as in our patients, there was a variable age of onset, the disease was not familial, and urinary glycolate exceeded urinary oxalate.

The findings of Gill and Rose differ from ours in one major way. They concluded that their patients responded to pyridoxine whereas urine glycolate remained elevated in our patients during long-term pyridoxine administration. Hyperoxaluria recurred in some of the patients described by Gill and Rose during pyridoxine treatment, and in others the hyperoxaluria did not recur when treatment was stopped; these authors did not comment on dietary protein intakes before and during treatment in their patients.

In summary, we found that 21 percent of male patients with idiopathic calcium oxalate stones have hyperoxaluria and that the endogenous production of oxalate is increased in some of them. Preliminary studies suggest that the metabolic abnormality is related to dietary protein, but further work needs to be done to confirm this and to determine the precise nature of the relationship between dietary protein and endogenous oxalate production.

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# Kidney Stones, Urine, and Cement

*WILLIAM C. THOMAS, JR., MD*

Calculi within the urinary tract occur in subjects of all ages, but the prevalence of particular types of calculi varies considerably in different parts of the world. For example, in Thailand 1 percent to 3 percent of rural children have bladder stones.[1] These stones consist of a uric acid core encompassed by crystalline calcium oxalate. Such bladder stones occur in areas where cereal grains constitute a large part of the diet and were common in England prior to the industrial revolution. In the United States the highest incidence of kidney stones is in the southeastern states, where the most common type of stones is composed of calcium oxalate, and these occur predominantly in white male adults.[2]

Many years ago while working with Dr. J.E. Howard and Dr. T.B. Connor at Johns Hopkins I observed that incubation of rachitic rat cartilage in urine from a healthy subject failed to mineralize the cartilage matrix, whereas incubation of such cartilage in urine from a patient with calcareous renal calculi resulted in complete mineralization for the matrix.[3] These observations were confirmed by subsequent incubations using urine from many calculous and healthy subjects (Figure 1).

Therefore, we deduced there was something in normal urine that prevented mineralization of rachitic cartilage matrix, and that there was little or none of this inhibitor of mineralization in the urine of patients with calcareous calculi.

On hearing about the above observations, a chemist working with us, Dr. Charles E. Bills, related an experience of his while a soldier in France during World War I. He was told that if captured by the enemy and if at any time he saw them pouring cement, he was to urinate on the freshly poured cement as this would prevent it from hardening. We thought this interesting and possibly relevant to our studies on urine from calculous patients. So we took urine from a calculous patient and a healthy subject to the Portland Cement plant in Baltimore where a chemical engineer agreed to test the effect of these urine specimens on the hardening of cement. The normal urine prevented the setting of cement but the stone-former's urine did not.[4]

Farmers have known of the action of urine on cement for a long time and are well aware of the need to keep livestock away from a recently poured cement floor in the barn. (Incidentally, the name Portland Cement was coined by Joseph Aspdin in 1824 because of the qualitative similarity between the cement he produced and a durable stone quarried in Portland, England.[5] ) Different cements vary slightly in their composition, but are composed predominantly of di- and tricalcium silicate and aluminate. Thus, calcium is common to both cement and calcareous calculi. Interesting also is that small amounts of silicate are regularly present in calcareous renal calculi.[6]

To possibly assist us in our search for the major urinary inhibitor of crystalline calcium salts, we turned to cement as a test medium. We mixed powdered cement with water, urine or extract of urine in a proportion of 7.5 g of cement to 4.8 ml of water or urine extract and poured these mixtures into miniature ice-cube trays. The cement cubes were tested for hardness after setting for 24 hours (Figure 2).

Using column chromatography (G50 sephadex followed by anion exchange resins) we have separated from urine of normal subjects a fraction that inhibits the setting of cement. We now know the inhibitor constituent of this fraction is acidic, has a molecular weight between 400 and 1,000 daltons, is resistant to mild hydrolysis, and that citrate is a major component. This particular fraction will also inhibit the formation of calcium oxalate crystals *in vitro* and is four to seven times as potent in this regard as can be explained by its content of citrate expressed as citric acid.

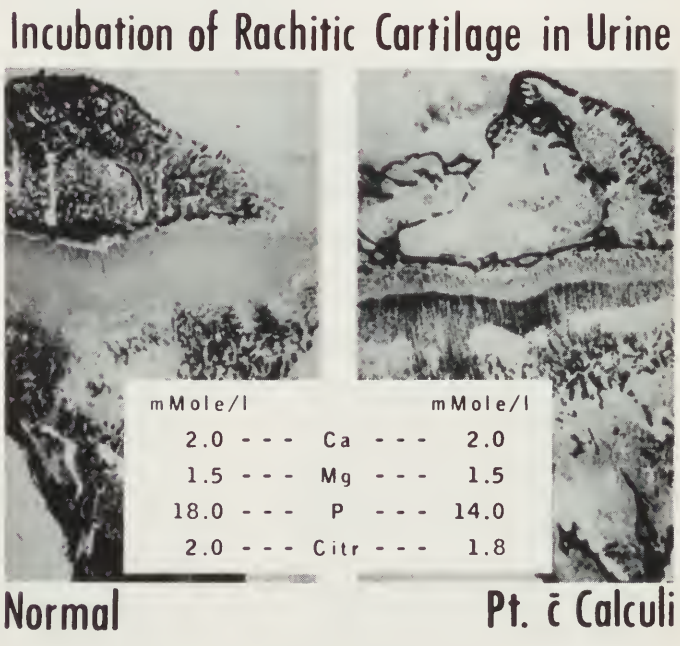
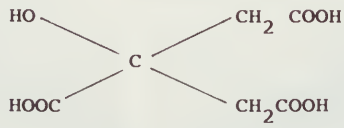



Figure 1. Slices of rachitic proximal tibiae from rats incubated in urine from a normal subject and urine from a patient with calculi. Urines adjusted to pH 7.4, equal osmolality and concentrations of calcium. Note extensive matrix mineralization ($AgNO_3$ stain) of cartilage matrix in tibia incubated in urine of the calculous patient and absence of cartilage matrix mineralization after incubation in normal urine.

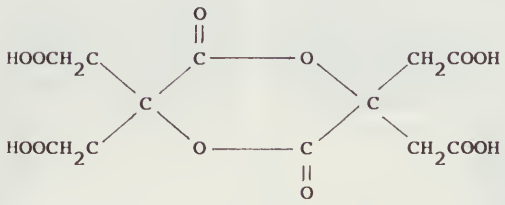
Dr. Thomas is Professor of Medicine, Division of Endocrinology & Metabolism, University of Florida. **Reprints:** "GRECC 182," VA Medical Center, Gainesville, FL 32602.



**Figure 2.** Miniature cement block made with water (upper left) and crumbling, soft block when powdered cement mixed with normal urine.




Citric Acid




A Citride

**Figure 3.**

Our first MRI analysis of the above isolated inhibitor of crystallization revealed only citrate, which led us to speculate that this inhibitor might be an unusual form of citrate. Years ago, Dr. Conant of Harvard pointed out that an alpha-hydroxy carboxylic acid is capable of forming an ester with itself.[7] Citric acid is such an acid, and a citride would be expected to have the formula depicted in Figure 3. A chemist associate made such a citride for us, and on testing it had essentially identical cement- and crystal-inhibiting properties as did the substance isolated from urine of normal subjects.

Presently we are not certain whether this synthesized citride is a dimer, trimer, or possibly a mixture of such esters. Further analysis of this compound is in progress, as is comparison with the inhibitor constituent isolated from human urine. It is conceivable that esterification of citrate could take place in the foot processes of the kidney. If so, this could explain why urine citrate is seemingly of such importance in preventing renal calculus formation and, in large part, also could account for the effect of "healthy" urine on cement.

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# Estrogens and Bone Cell Models

*T. KENNY GRAY MD*

Postmenopausal women lose bone mass, and this loss is a major component of the syndrome of osteoporosis. Estrogen administration to perimenopausal women prevents or delays this loss of bone.[1] Prior to 1987 it was not clear whether this estrogen-bone interaction was due to direct or indirect effects of the estrogens on bone cells. In 1987 several laboratories described the presence of specific estrogen binding in human osteoblasts and a rat osteoblastic cell line.[2,3] We describe direct effects of 17β-estradiol, the active metabolite of the estrogens, on UMR106 cells, an osteoblastic cell line derived from a rat osteoblastic osteosarcoma. We have used this cell line as surrogate osteoblasts while recognizing the limitations involved in the use of a transformed cell line as a mirror of *in vivo* events. We acknowledge these limitations by terming these cells as an "*in vitro* model."

Incubation for two days of the UMR106 cells in culture medium devoid of serum and containing 17β-estradiol produced an inhibition of cell proliferation and a stimulation of alkaline phosphatase activity. This effect of estradiol was relatively specific since a fibroblast cell line did not respond to incubation under identical conditions. The estradiol effect on the UMR106 cells was influenced by cell density and the proliferation rate. No effect was observed after only one day of culture (low cell density) or after four days of culture (confluence). The inhibited growth and increased alkaline phosphatase activity was observed in the initial experiments only after two days of incubation.

Serum contains estrogens, other hormones, and growth factors. To control the influence of these factors on the experimental results, all the experiments involved the incubation of UMR106 cells in culture medium devoid of serum but supplemented with insulin, transferrin, and selenium. Table 1 shows the effect of estradiol on the growth and alkaline phosphatase activity of the UMR106 cells incubated for three days in medium containing either vehicle or different concentrations of estradiol. Estradiol inhibited cellular growth and increased the alkaline phosphatase activity in a dose-dependent manner. The peak effect was associated with the $10^{-10}$M concentration and the dose response was biphasic.

The effects of 17β-estradiol and 17-alpha-estradiol, an epimer with weak bioactivity, on the growth and enzyme activity of the UMR106 cells are depicted in Table 2. Again 17β-estradiol inhibited growth and stimulated alkaline phosphatase activity in a dose-dependent manner over a concentration range from $10^{-11}$ to $10^{-9}$M. In contrast, 17-alpha-estradiol had no effect on the proliferation rates or the alkaline phosphatase activity of the UMR106 cells.

**Table 1. The effect of 17b-estradiol (E) on the cellular proliferation and alkaline phosphatase content (AP) of UMR106 cells incubated for 3 days in serum free medium. Cell counts and AP were assayed in aliquots of cell lysates from the same well. The values are expressed as means ± SEM.**

| Condition | Cells x 104 | AP-nmoles/$10^4$ cells |
|---|---|---|
| Vehicle | 9.65 ± 0.75 | 23.6 ± 0.86 |
| E, $10^{-12}$M | 8.40 ± 0.30 | 29.6 ± 0.68 |
| E, $10^{-11}$M | 9.25 ± 0.30 | 21.8 ± 0.42 |
| E, $10^{-10}$M | 5.30 ± 0.40** | 49.6 ± 2.0** |
| E, $10^{-9}$M | 7.30 ± 0.40* | 31.6 ± 0.4* |
| E, $10^{-8}$M | 7.80 ± 0.25* | 29.8 ± 1.8* |

* $P < 0.025$ versus vehicle
** $P < 0.01$ versus vehicle

**Table 2. Effects of 17-alpha-estradiol and 17β-estradiol on the proliferation and alkaline phosphatase content (AP) of UMR106 cells incubated for 3 days in serum-free and phenol red-free medium. The cell counts and AP were assayed in aliquots of cell lysates wells. The values are means ± SEM.**

| Condition | Cells x 104 | AP-nmoles/104 cells |
|---|---|---|
| A. 17-alpha-estradiol | | |
| Vehicle | 7.10 ± 0.35 | 19.6 ± 3.8 |
| $10^{-11}$M | 8.55 ± 0.55 | 17.2 ±2.8 |
| $10^{-10}$M | 7.10 ± 0.20 | 23.6 ± 4.4 |
| $10^{-9}$M | 6.80 ± 0.25 | 23.2 ± 9.8 |
| B. 17β-estradiol | | |
| Vehicle | 7.20 ± 0.70 | 19.4 ± 2.0 |
| $10^{-11}$M | 3.95 ± 0.35* | 52.2 ± 3.0* |
| $10^{-10}$M | 3.50 ± 0.20* | 56.2 ± 2.4* |
| $10^{-9}$M | 3.90 ± 0.40* | 35.6 ± 3.6* |

* $P < .01$ vs. vehicle

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The UMR106 cells contain high-affinity binding sites for estradiol (K. Korach PhD, Laboratory of Reproductive and Developmental Toxicology, National Institute of Environmental Health Sciences). Scatchard analysis of the binding kinetics revealed a dissociation constant of $0.3 \times 10^{-10}$M and a calculated 1000-1200 receptors per cell. This number of receptors, although low in comparison to uterine and mammary tissues, is consistent with the receptor numbers recently described in other osteoblastic cells.[2,3]

In collaboration with Drs. Silverman, Bankson, and Rifai, Department of Laboratory Medicine, North Carolina Memorial Hospital, we examined the effect of estradiol on six enzymes in the UMR106 cells. These enzymes were gamma glutanyl transferase, aspartate aminotransferase, acid phosphatase, lactic dehydrogenase creatine kinase, and alkaline phosphatase. Four of these enzymes were stimulated by estradiol in a dose-dependent manner. Acid phosphatase activity was unaltered, indicating that the enzyme stimulation could not be explained by a nonspecific rise in protein synthesis.

ROS 17/2.8 is another well-known osteoblastic cell line. When incubated in the identical fashion as described above for the UMR106 cells, these cells did not respond to estradiol treatment. There was no change in growth rates, enzyme concentrations, or the secretion of osteocalcin (a bone-specific protein) when the ROS 17/2.8 cells were exposed to estradiol over a range from $10^{-11}$ to $10^{-8}$M.

These experimental results show that estradiol acts directly on an osteoblastic cell line, the UMR106 cells. The action is dose dependent, metabolic specific, and mediated by specific receptors. The peak action occurred at the $10^{-10}$M concentration under conditions using serum-free medium. The biological effect of estradiol on the enzyme activity of the UMR106 cells is consistent with an induction of differentiation.

Conventional wisdom holds that estrogens inhibit bone resorption although the mechanism of this inhibitory effect is unknown. Given that lymphokines stimulate an *in vitro* model of osteoclast precursors, that osteoclasts are the cells involved in bone resorption, and that lymphocytes have estrogen receptors, we examined the action of estradiol on this *in vitro* model of osteoclast precursors, the U937 cell line.[4] The U937 cells have a monoblastic phenotype, become multinucleate in culture, increase their concentration of tartrate-resistant acid phosphatase, and resorb bone particles when exposed to $1,25(OH)_2D_3$, lymphokines, and differentiation inducing factor.[4] These cells secrete superoxide ion and hydrogen peroxide when acutely perturbed. We used this latter feature to assess the action of estradiol-treated lymphocytes on this model of osteoclast formation.

The peak luminol-enhanced luminescence of the U937 cells incubated in culture medium containing different additives is shown in Table 3. Maximal luminescence, that is, secretion of hydrogen peroxide, occurred when the U937 cells were exposed to $1,25(OH)_2D_3$ and lymphokines simultaneously. A purified lymphokine, gamma interferon, produced no response by itself but did produce a half-maximal response together with $1,25(OH)_2D_3$. Other additives, including estradiol or conditioned medium from lymphocytes treated with estradiol (LCM-E) produced little or no response in the LEL of the U937 cells.

The addition of LCM-E and $1,25(OH)_2D_3$ produced a dose-dependent inhibition of LEL in contrast to the maximal stimulation of LEL produced by conditioned medium from activated normal human lymphocytes (LCM) and $1,25\ (OH)_2D_3$ (Table 4). This inhibitory effect was reversible, metabolite specific, and not due to a toxic effect of the reagents in the assay.

These results indicate that normal human lymphocytes incubated in the presence of estradiol secreted

**Table 3. Peak luminol - enhanced luminescence (LEL) of U937 cells incubated for 5 daysin culture medium containing conditioning medium from PHA-stimulated human lymphocytes (LCM). The LCM was 20% (vol/vol) of the final volume. Recombinant interferon$\gamma$ (INF -$\gamma$) was added to the medium in a dose of 1000 units/ml and $1,25(OH)_2D_3$was present at a final concentration of $10^{-8}$M. LEL stimulated by PMA (100 ng/ml) is expressed as scintillations per minute (spm, mean $\pm$ SEM). All conditions were tested in four separate experiments.**

| | LEL, spm |
|---|---|
| Cell - free medium alone | 2,000 $\pm$ 50 |
| U937 cells | 2,000 $\pm$ 50 |
| U937 cells + 17$\beta$ - estradiol ($10^{-6}$M) | 2,000 $\pm$ 50 |
| U937 cells + LCM | 8,500 $\pm$ 50* |
| U937 cells + LCM-E ($10^{-6}$M) | 2,000 $\pm$ 50 |
| U937 cells + LCM-E ($10^{-8}$M) | 2,000 $\pm$ 50 |
| U937 cells + LCM-E ($10^{-10}$M) | 2,000 $\pm$ 50 |
| U937 cells + LCM.1,25 $(OH)_2D_3$ | 104,900 $\pm$ 10,880** |
| U937 cells + 1,25 $(OH)_2D_3$ | 2,000 $\pm$ 50 |
| U937 cells + INF - $\gamma$, 1,25 $(OH)_2D_3$ | 45,000 $\pm$ 1,200** |
| U937 cells + INF-$\gamma$ | 2,000 $\pm$ 50 |

*$P < 0.05$ versus cell free medium or U937 cells alone
**$P < 0.01$ versus U937 cells + LCM

a soluble factor that was transferred in the conditioned medium. This estrogen-dependent soluble factor was able to inhibit the stimulation of the oxidative metabolism of the U937 cells. This *in vitro* response suggests that estrogen-dependent lymphokines may inhibit the activity or formation of osteoclasts *in vivo*.

In summary, 17β-estradiol acts directly on osteoblastic cells, the UMR106 cells, to inhibit growth and increase differentiation. This action is consistent with the *in vivo* development of mature osteoblasts. Estradiol also can act indirectly on osteoclasts and/or their precursors by inducing the secretion of lymphokines that inhibit the activity and/or the formation of osteoclasts *in vivo*.

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**Table 4. Peak LEL of U937 cells incubated for five dauys in the presence of 1,25 $(OH)_2D_3$ ($10^{-8}$M) and LCM or LCM-E (20%, vol/vol). The LCM-E was produced by incubating PHA-stimulated human lymphocytes in medium containing E($10^{-10}$ to $10^{-6}$M). LEL was triggered with PMA (100 mg/ml). Four experiments were performed and duplicate assays were performed for eachcondition in a given experiment. Values for LEL are expresssed as mean ± SEM>**

| Condition | LEL, spm | % Maximal Response |
|---|---|---|
| 1,25 $(OH)_2D_3$ + LCM | 118,096 + 10,870 | 100 |
| 1,25 $(OH)_2D_3$ + LCM-E ($10^{-10}$M) | 84,640 + 6,200 | 72 |
| 1,25 $(OH)_2D_3$ + LCM-E ($10^{-8}$M) | 43,920 + 18,230* | 37 |
| 1,25 $(OH)_2D_3$ + LCM-E ($10^{-6}$M) | 13,070 + 3,920 | 11 |

* $P < 0.05$ versus LCM response
** $P < 0.01$ versus LCM response


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# Graves' Disease: Clinical Correlation with Autoantibody Activity

*WILLIAM A. VALENTE MD*

Graves' disease is an unusual disorder presenting a constellation of clinical findings. Diffuse thyromegaly, often but not always, associated with hyperthyroidism, is seen in association with a characteristic ophthalmopathy and pretibial skin lesion. The basic pathogenesis of Graves' disease is believed to involve altered cell-mediated immunity and autoantibody production. This article deals with a pertinent review of the clinical manifestations of Graves' disease and presents new basic research information with particular attention to the clinical correlation of the immune disturbance and the ultimate clinical presentation.

The diffuse thyroidal enlargement characteristic of Graves' disease usually is termed toxic when associated with overt hyperthyroidism. Examination of the thyroid histologic picture in this situation shows marked hyperplasia with transition from cuboidal to columnar epithelium and increased resorption of colloid. Additionally, there are areas of lymphocytic infiltration and occasional germinal center formation. Thus, the thyroid is enlarged throughout and has a fairly homogeneous, regular contour with marked hypervascularity. The goiter may be of normal size (20 g) in older individuals but is more likely to be enlarged severalfold and clearly visible. This thyroidal hyperplasia is accompanied by marked hyperactivity and release of inordinate amounts of T3 and T4, ultimately leading to the clinical signs of increased adrenergic activity, weight loss, and the systemic symptoms of thyrotoxicosis.

## Orbital Involvement

If the Graves' patient is carefully examined, there are usually signs of orbital involvement. This is clinically manifested by exophthalmos or proptosis, limited extraocular movements, scleral injection, chemosis, and occasionally by decreased visual acuity. Pathologic examination of the orbital structures reveals marked increased retro-orbital fat and connective tissue, associated with swollen extraocular muscles and lymphatic obstruction. The increased orbital pressure forces forward protrusion of the eyes, accounting in large measure for the proptosis noted. Further, the lymphocytic infiltration may ultimately lead to scarring and retraction of the extraocular muscles restricting movement. Rarely, the increased orbital pressure may impair arterial flow to the optic nerve leading to ischemic optic neuropathy. Though overt signs of orbital involvement are not always evident on clinical exam, careful ophthalmologic exam with particular attention to the increased intraocular pressure on upgaze indicates orbital involvement in nearly all Graves' patients.

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## Dermopathy

In rare cases of Graves' disease, a characteristic dermopathy is present. This may involve the skin of the lower extremities and dorsum of the feet with the specific term of pretibial myxedema. Though unrelated to hypothyroidism, the term myxedema has been used because of the marked "myxematous" changes in the dermal layer with moderate increase in collagen formation and intercellular glycosaminoglycan deposition. The skin assumes a thickened, lumpy, nodular texture. These changes may occasionally be seen in dependent areas of the upper extremity and even the thorax and jaw though these are quite unusual. If the distal periosteum of the fingers is involved, clubbing may result and the term acropachy is used. These latter changes are seen only with extremely active Graves' disease, invariably associated with hyperthyroidism and ophthalmopathy.

The changes of Graves' disease occur in the context of an altered immune state. There is often an associated diffuse lymphadenopathy, leukopaenia, and even occasional splenomegaly, hilar adenopathy or thymic hyperplasia. The supposition of altered immunity originally was offered by Dr. Paul Ehrlich over 100 years ago when he suggested that the "horror autotoxicus" of Graves' disease may be mediated by an "altered immune state." To understand the clinical manifestations of this disorder, it is helpful to examine the underlying alterations in the immune system. A careful correlation of these basic findings often will lead to an improved understanding of the care and treatment of these patients.

## Research Breakthroughs

In the early part of this century it was believed that Graves' disease was caused by a hypersecretion of thyroid-stimulating hormone (TSH) from the pituitary gland. A major breakthrough was realized by the studies of Drs. Adams and Purvis in the early 1950s with the classic description of the long-acting thyroid stimulator (LATS).[1] They devised a classic bioassay wherein guinea pigs were loaded with radioactive iodine and then injected with various thyroid-stimulating substances. The radioiodine stored in the thyroid was briskly released by TSH, and the blood radioactivity consequently would rise, indicating thyroid stimulation. These researchers recognized that serum from a particular patient with Graves' disease, Mrs. C, markedly

augmented radioiodine release in the guinea pig model, even continuing for many hours after the recognized "short" effect of TSH would have abated. This long-acting thyroid stimulator ultimately was found to be an IgG and represented a profound insight into the initial pathogenesis of Graves' disease in particular, and the autoimmune thyroid diseases in general.

To further complement the role of autoimmunity, Witebeski and Rose[2] described a classic study of induced autoimmune thyroid disease by injecting homogenized thyroid tissue into mice, and Roitt and Doniach et al. described the antithyroglobulin antibody so commonly used clinically.[3] This antithyroglobulin antibody, however, had no functional significance and served only to mark the autoimmune process. Rather, the LATS antibodies did correlate with the presence of hyperthyroidism in approximately 50 percent of individuals with active Graves' disease. Instead of recognizing the interesting correlation with Graves' disease, many investigators focused on the 50 percent lack of correlation, and the entire role of the LATS factor was called into question for many years.[4]

Advances in cellular receptor concepts in the 1960s and 70s led to improved understanding in the continuing puzzle of the autoimmune thyroid diseases. The classic studies of Mehdi and Nussey described a particular group of Graves' IgG that bind to the TSH receptor and thus block the normal binding of TSH.[5] This group of autoantibodies has been termed the thyrotrophin-binding inhibitory immunoglobulins (TBII). Some Graves' IgG have been noted to stimulate the thyroid cell by binding to the TSH receptor and augmenting intracellular cyclic AMP levels.[6] The increased cyclic AMP is the primary second messenger for the hyperactivity of the thyroid cell leading to increased T3 and T4 secretion. This particular group of autoantibodies has been termed thyroid stimulating antibodies (TSAb). Further, another group of autoantibodies has been described that binds to the TSH receptor and increases thyroid growth, the so called TGI or thyroid growth immunoglobulins.[7]

The alteration in humoral antibody production appeared confusing as these variously described autoantibodies did not coexist in each Graves' patient.[8,9] Some individuals had TBII, others TSAb, and still others a TGI. Again, it seemed difficult to reconcile an abnormal IgG interacting with the TSH receptor as the primary cause for Graves' disease.

## Recent Advances

Several recent advances in basic cell culture and immunology have helped clarify these issues. The first advance involves the availability of the FRTL-5 thyroid cell line and the second, the use of the monoclonal antibody technology.

In 1979, Ambesi and Coon successfully cloned a normal rat thyroid cell and established the FRTL-5 thyroid cell culture system.[10] These normal rat thyroid cells have been grown continuously in culture for the last ten years. They exhibit nearly all the normal thyroid characteristics including follicle formation, colloid secretion, thyroglobulin production, T3 - T4 production, iodine trapping, and possess a functional TSH receptor. This FRTL-5 thyroid cell is absolutely dependent on TSH for its growth and function, and thus provides an ideal model to study the TSH receptor and various thyroidal cellular activities. These cells were easily adapted to measure any thyroid stimulating or inhibiting substance such as those described above. Clinical assays are readily available to measure TSH binding antibodies, stimulating antibodies, and growth promoting antibodies.

A major advance in immune research was noted in 1975 with a classic description of monoclonal antibody formation by Kohler and Milstein.[11] This system uses a nonsecreting myeloma cell line to provide the intracellular machinery needed for large-scale pure monoclonal antibody production (given the appropriate immune message) and the immortality of a tumor cell. If this particular cell is fused with a sensitized immunocyte, such as a lymphoblast exposed to specific immunogen, an immortalized cell (a hybridoma) would be created and secrete specific monoclonal immunoglobulin in large amounts to the specific antigen used to sensitize the lymphoblast. Highly specific immune probes could be generated in large quantities. Thus, one could create an antibody to any specific antigen, limited only by one's imagination.

Turning to the problem at hand, the stage is set for several interesting experiments. Using the basic monoclonal technology, we were able to fuse individual Graves' lymphocytes obtained from the blood of patients with active Graves' disease. The immune message of these lymphocytes was joined with the myeloma cell line in a hybridoma, and specific monoclonal antibodies resulted. The system was somewhat different, however. We used a naturally determined immune message of the individual Graves' lymphocytes rather than immunizing with a foreign antigen. These human lymphocytes were fused with a mouse myeloma line resulting in a heterohybridoma. Thus, naturally determined artificially grown pure monoclonal antibodies were realized. We conducted this experiment on multiple occasions and have generated numerous monoclonal antibodies.

Four particular monoclonal antibodies (listed in the Table) were generated from two patients with active

Graves'disease. [12] Each of the antibodies had characteristic bioactivities. Because we have the FRTL-5 thyroid cell system available, we can evaluate the specific activity of each individual antibody. Certain monoclonal antibodies were potent inhibitors of TSH binding, stimulators of cyclic AMP formation and promotors of thyroid growth (208F7, 206H3). Other monoclonal antibodies have only one or several of these bioactivities (129H8, 122G3). Since each was a naturally predetermined antibody and each reacted variably with the TSH receptor, one concludes that an array of autoantibodies are made in Graves' disease. Many IgG, each with a specific interaction with the TSH receptor and bioactivity, are produced. It is not a single autoantibody but rather a combination of autoantibodies in the autoimmune thyroid process.

To further confirm the true biologic nature of these Graves' monoclonal antibodies, we injected each into the mice and demonstrated the long-acting thyroid stimulator effect in certain situations. We have thus isolated part of the cause for Graves' disease and shown that it has a clear biological relevance.

Returning to the individual Graves' patients, one can identify certain correlations between clinical presentation and specific Graves' autoantibodies. Using the FRTL-5 thyroid system to assay for the thyroid cyclic AMP stimulator in a large number of Graves' patients, we see an excellent correlation with disease activity.[13] As depicted in Figure 1, the stimulator activity is present in the vast majority of individuals with active Graves' disease and absent in states of remission. This autoantibody can be used to predict the natural course of Graves' disease and to identify those patients who have entered a phase of remission. Further, very elevated levels of stimulating antibodies are seen characteristically in those individuals with very active Graves' disease and in mothers who bear offspring with transient neonatal Graves' disease, a disorder of transplacental IgG passage.

The presence of goiter has been noted in those patients with thyroid growth-promoting immunoglobulins.[7,14] This bioactivity may coexist with thyroid stimulating IgG but probably represents separate autoantibodies to the TSH receptor, accounting for the clinical observation that some patients have fairly severe hyperthyroidism with small goiter. These individuals have been noted to have elevated thyroid-stimulating antibody titers but nearly absent thyroid growth-promoting antibody levels. Conversely, mild hyperthyroidism has been seen with large goiters when the TSAb levels are low and the TGI levels are elevated. Thus, the particular clinical picture seems to be a composite of several autoantibodies acting in concert.[14]

Turning to the ophthalmopathy, we can describe specific autoantibodies that interact with the connective tissue and muscle elements leading to increased collagen formation.[15] Again a specific class of autoantibodies seems to promote collagen formation and correlate fairly well with the severity of exophthalmos and ophthalmopathy.

Even more intriguing is the recent observation of such collagen-promoting autoantibodies in individuals with Graves' disease and pretibial myxedema. These IgG can interact with fibroblasts and stimulate the production of Type IV collagen and glycosaminoglycans. Again, the correlation is fairly good between these autoantibody levels and the clinical disease. One can further extend the clinical correlation of basic autoantibody formation

**Table. Monoclonal Antibodies**

| Monoclonal Antibody Number | Antibody Effect | | | |
|---|---|---|---|---|
| | % Inhibition 125-I TSH Binding | % Inccrease cAMP Production | % Increased 3H-thymidine Incorporation | % Lats Effect |
| 208F7 | 80 | 100 | 21 | 300 |
| 206H3 | 20 | 50 | 21 | 330 |
| 129H8 | 78 | 12 | 20 | 10 |
| 122G3 | 45 | 0 | 0 | 2 |
| Control | 0 | 0 | 0 | 0 |

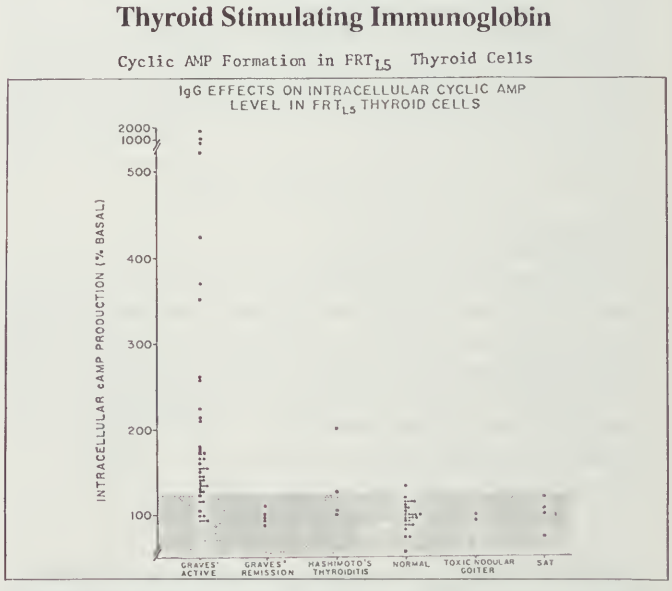



**Figure 1.** Immunoglobulin G effect on cAMP production using the FRTL-5 cell assay. These IgG were prepared from patients with the listed disease states.

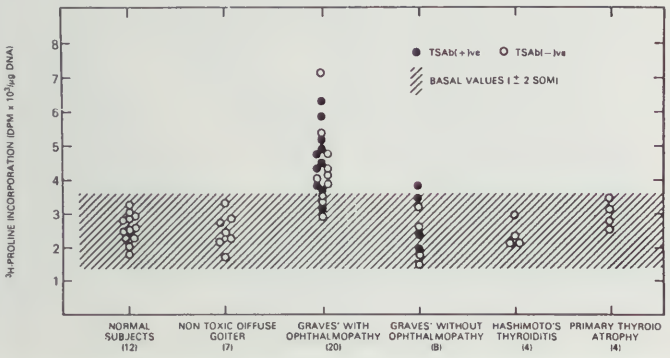



**Figure 2.** Effect of IgG preparations from sera of individual patients with various thyroid diseases on collagen synthesis. Collagen synthesis was quantitated by 24-hour $^{3}H$-proline incorporation into confluent human fibroblast cultures.[15]

with specific manifestations of Graves' disease. There is not a single LATS in the autoimmune thyroid diseases but rather multiple autoantibodies. Some of these may stimulate the thyroid to levels of overactivity, some may cause increased thyroid growth, and others appear to augment collagen formation in the retro-orbital tissues or the pretibial regions. A composite bioeffect may be realized and correlated with the ultimate clinical presentation of the Graves' process.

Clearly, the above summary represents a simplistic overview of the autoimmune thyroid diseases, but at least we begin to address some basic aspects of the pathogenesis. Continued research along these lines will allow us to improve diagnostic accuracy and therapeutic efficacy in dealing with this group of most interesting patients.

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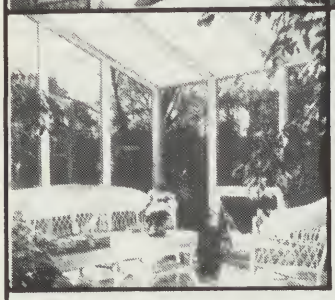


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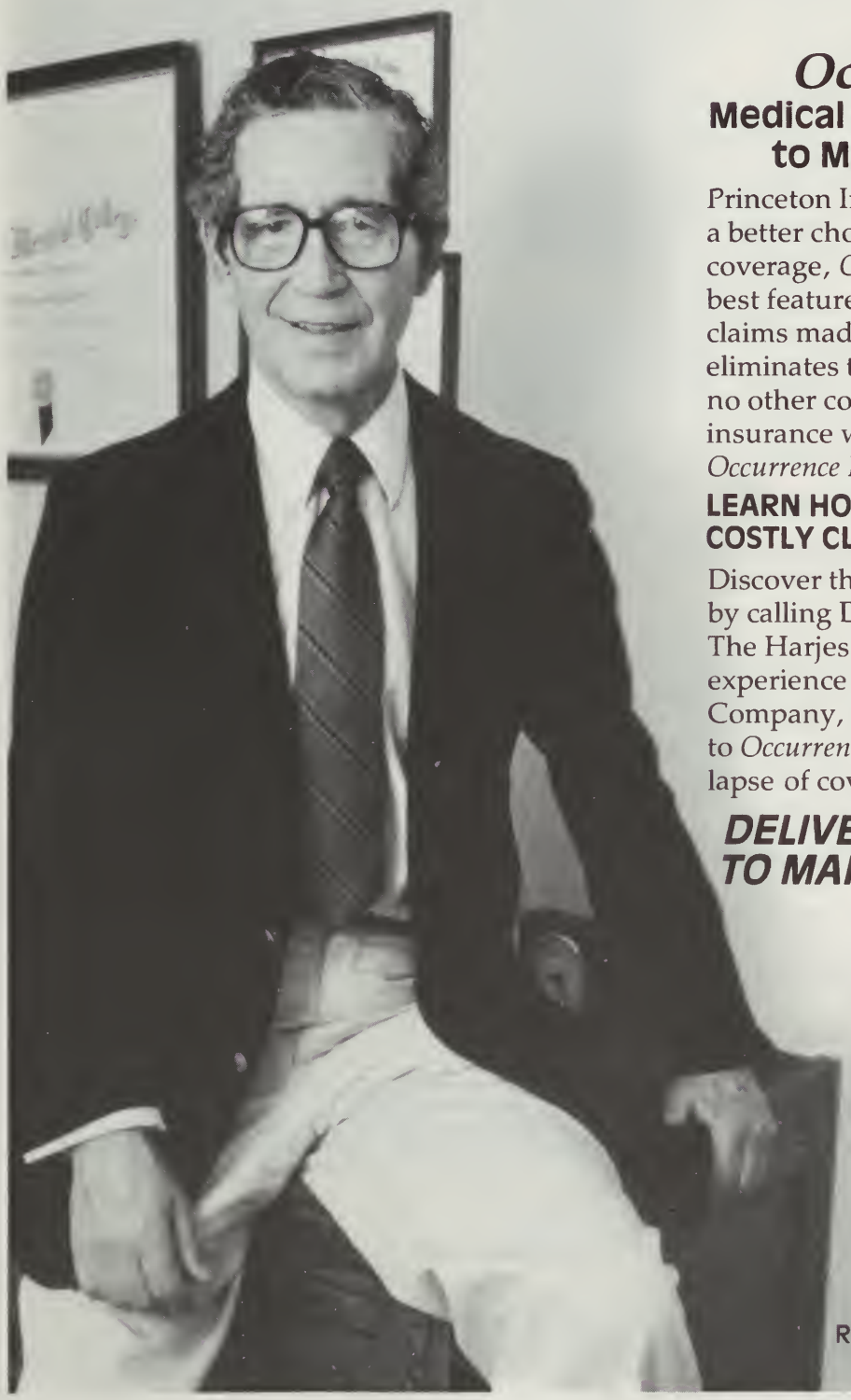
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# Long-Term Survival in Anaplastic Thyroid Cancer

*CRAIG J. SCHAEFER MD, FACS*

**Thyroid cancer is a relatively common malignancy with a prevalence of 0.5 to 1 percent of all nondermal cancers. While most of these are well-differentiated tumors, about 5 percent are of the virulent, anaplastic form. Median survival for patients with this disease is less than six months. This patient, with a large cell anaplastic carcinoma of the thyroid, after extensive surgery and radiation therapy has survived more than five years without evidence of recurrent disease.**

A 59-year-old white female was admitted to the Emergency Department on 12/26/82 following respiratory arrest. She was successfully intubated with subsequent restoration of normal alertness and mentation. Her past history shows that seven months prior to this she had been admitted to the same institution for asthmatic-related respiratory failure. At that time the patient was found to have a mass involving her thyroid gland. No work-up was initiated. Three weeks prior to her respiratory arrest she had complained to her private physician about worsening shortness of breath, and it was noted that the thyroid mass had increased in size. Other than her history of respiratory failure her review of systems was unremarkable. She had no history of allergies. Her medications included chlordiazepoxide, prednisone, pseudoephedrine, hydrochlorothiazide/triamterene, theophylline, and beclomethasone dipropionate. She had a 40-pack per year history of smoking and does not imbibe alcohol. Physical examination at the time of her Emergency Department admission demonstrated a 3 by 4 cm hard nodule arising from the midportion of the thyroid gland. There was no palpable cervical adenopathy. The mass was attached to underlying structures.

The patient was admitted to the Intensive Care Unit for stabilization. The initial work-up demonstrated her to be euthyroid with a T-3 of 27, T-4 equal to 9.8, and T-7 index equal to 2.6. All other tests including EKG, chest x-ray, and arterial blood gases were normal. On 12/28/82 she was taken to the Operating Room for neck exploration and tracheostomy. Exploration revealed that a large malignancy arising from the thyroid had directly invaded into the overlying strap muscles anteriorly and posteriorly into the trachea. Despite the size and extensive nature of the tumor, the right and left recurrent laryngeal nerves were identified and salvaged. Likewise the inferior pole parathyroid glands were identified and salvaged bilaterally. A subsequent total thyroidectomy with resection of the anterior wall of the trachea from the cricoid cartilage to the fourth trachea ring was performed. This was a clinically incomplete resection with residual tumor left on the posterior wall of the trachea and along the lateral walls of the esophagus. Frozen section revealed anaplastic carcinoma of the thyroid gland. A tracheostomy tube was placed and the procedure terminated. Complete surgical resection was deemed not possible due to extensive local invasion.

Following recuperation from surgery the patient received 7,000 rads of radiation to the neck and mediastinum. She was placed on Synthroid 0.2 mg q day during this. No I-131 therapy was instituted.

In May 1983 triple endoscopy failed to reveal any gross residual disease. Biopsies taken at that time likewise failed to reveal any residual cancer. The tracheostomy tube was removed subsequently resulting in spontaneous closure of the trachea stoma. With this closure the patient was able to speak without difficulty or abnormality.

A thyroid scan performed in August 1983 demonstrated no residual thyroid tissue. The patient remained asymptomatic. Repeat thyroid scans have continued to demonstrate no residual functioning thyroid tissue. TSH levels have consistently been maintained below 0.1 microunits per ml. Thyroglobulin levels have remained below 4 nanograms per ml. Repeat triple endoscopies have failed to reveal any residual tumor, either grossly or by biopsy.

Pathological evaluation revealed a highly undifferentiated carcinoma of the giant cell type of the thyroid. Separate pathological evaluations at multiple institutions confirmed this to be an aneuploidic undifferentiated giant cell carcinoma.

## Discussion

Anaplastic carcinoma of the thyroid is a relatively rare malignancy. Thyroid cancer has an overall incidence of four new cases per year per 100,000 population. Anaplastic tumors comprise less than 5 percent of all thyroid cancers. They usually occur in patients older than 60 years. Patients often have known history of goiter or therapy for papillary cancer of the thyroid. The presenting symptoms usually include a rapidly enlarging mass of the neck, dysphagia, and symptoms of airway obstruction. On examination the tumors are typically hard, ill-defined, and demonstrate evidence of extra glandular spread. If extremely large, the tumors may feel soft due to central tumor necrosis. Obvious fixation to surrounding structures is readily evident. Adenopathy is unusual.

Preoperative staging reveals stage I tumors to be confined to the region of the gland, stage II tumors to have palpable regional lymphadenopathy, stage III to show

Dr. Schaefer is in private practice in Salisbury.

extensive invasion of the soft tissues of the neck, and stage IV to demonstrate distant metastases.

With a five-year survival rate of about 3 percent, treatment for anaplastic thyroid cancer usually is considered palliative. In the largest single review concerning anaplastic carcinoma, Nel et al.[1] reported on 82 cases spanning a 25-year period. Pathological evaluation demonstrated small cell tumors (possibly related to lymphoma), giant cell tumors, spindle cell tumors, and giant spindle cell mixed tumors. Patients with small cell tumors had the best prognosis. Other factors regarding prognosis were those malignancies less than 5 cm in diameter, those tumors without evidence of local invasion, those tumors without obvious lymph node involvement, and those that could be totally excised.

Anaplastic cancers of the giant and/or spindle cell variety and those exhibiting extensive local tumor invasion and/or metastases had a poor prognosis. Median survival was four months, and the five-year survival 3.6 percent. Ploidy studies also correlate well with tumor aggressiveness, the aneuploidic tumors demonstrating much more virulence than euploidic tumors.[2] Casterline[3] reported an 8.8 percent five-year survival in those who underwent curative resection. No advantage was found to total thyroidectomy and radical neck dissection in these patients, with wide local excision of the malignancy and removal of all obvious cancer-bearing lymph nodes the only treatment offered.

Radiation therapy alone or with surgery has demonstrated no improvement in survival. The addition of a variety of chemotherapeutic agents has, however, shown limited promise. Tallroth[4] reports a 12 percent three-year survival in patients treated with bleomycin, cyclophosphamide, 5-fluorouracil, radiation therapy, and surgery. Control of local recurrence was achieved in 68 percent of patients. Despite this, 32 percent did die of local recurrence. In an attempt to sensitize local tumor nests to radiation, Kim[5] used low dose Adriamycin plus hyperfractionated radiation therapy. This achieved local control in seven of nine patients and allowed for one long-term (18 months) survivor. Actinomycin D combined with surgery and radiation therapy also has achieved local control in three of six patients as reported by Lindberg.[6] Overall, however, most patients succumb to the disease even with aggressive multimodal therapy.[7] Despite the dismal prognosis, aggressive treatment should not be withheld as long-term survival remains undetermined for the individual patient.

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# Generalized Drug Dispensing by Physicians: An Ethical Dilemma

*LOUIS C. BRESCHI MD*

**Drug dispensing by physicians always has been permitted in appropriate circumstances. Recent marketing by drug repackagers raises serious ethical problems for both physicians and medical societies. This position paper addresses the ethical difficulties raised by this business venture and by those who encourage it.**

In a discussion of drug dispensing by physicians, it must be stated at the outset that this activity by physicians always has existed, is ethical, and often is in the patient's best interest. However, the *generalized* dispensing of drugs by physicians presents other concerns. Condoning or encouraging of such an activity by a medical society may have ethical conflicts.

### Conflict of Interest

All physicians who write prescriptions base their decisions about what prescriptions to write on what is best for the patient as well as the financial cost to the patient, when the cost factor does not jeopardize the results of the treatment. The physician who dispenses drugs assumes an added responsibility of protecting the patient's interest. It is difficult to deny the fact that a physician may easily be influenced in writing prescriptions by the presence of certain drugs and the absence of others in his dispensing repertory. This should not unduly influence the physician, but herein lies the real conflict in condoning more generalized physician dispensing.

### Physician as Entrepreneur

When a physician engages in any activity thay involves financial gain other than direct "hands-on" care, this unavoidably becomes a secondary business enterprise. Again, it is arguably necessary that physicians be part of such business enterprises in certain areas in order to provide patients with up-to-date treatments, care, or other services more rapidly, more conviently, and perhaps even less expensively. This does not diminish the importance of disclosure on the part of the physician that this is a secondary business venture. The generalized dispensing of drugs by physicians as a necessary or unique enterprise is hard to classify in this category.

Even more questionable is the activity of the repackaging companies in this business venture. Anticipating a $3 billion per year industry by 1995, these drug and repackagers commonly advertise to physicians a $20,000 to $50,000 added yearly income if they enter into such a business venture. As noted medical economist Uwe E. Reinhardt PhD (the James Madison Professor of Political Economy at Princeton University) recently commented in an article about physician dispensing, "If many physicians defend this new practice with appeal to the patient's convenience, why have physicians not thought of this kindly gesture before?"

### Historical Guidelines for Physicians and Pharmacists

Those who would encourage the general dispensing of drugs by physicians point to the AMA stand in 1987 opposing the Wyden Bill, which sought to virtually eliminate physician dispensing by passing federal legislation. The ground on which the AMA vigorously opposed this Bill was that of federal intrusion into the private practice of medicine. However, this 1987 statement of the AMA (to defend against the Wyden Bill) must be read in conjunction with the December 1986 position of the AMA House of Delegates, which states, in part,

> Although there are circumstances in which physicians may ethically engage in a dispensing of drugs, services, or other products, physicians are urged to avoid *regular* dispensing and *retail* of drugs, devices, or other products when the needs of patients can be met adequately by local ethical pharmacies or suppliers.

The Med-Chi *Compendium* contains many directives and guidelines for physicians in Maryland, the dos and don'ts pertaining to transgressions by physicians and pharmacists in their respective professions. One must question whether these guidelines were frivolous efforts or, indeed, done with the best interests of patients, physicians, and pharmacists in mind.

Also included in the *Compendium* are statements and state legislation based on good, ethical principles that deal with similar areas touching physicians practices. A clear-cut statement listed under 107.04 on laboratory referrals says,

> The attending physician is entitled to fair compensation for the professional services he renders. He is not engaged in a commer-

Dr. Breschi is Chairman of Med-Chi's Professional Ethics Committee.

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> cial enterprise, however, and any markup, commission, or profit for services rendered by a laboratory is considered to be exploitation of the patient under [Maryland Law HO-15-504 of the Health Occupations Article].

One can only speculate whether generalized drug dispensing by physicians in the State of Maryland will result in similar legislation.

In summary, an essential quality of the practice of medicine, that of allowing physicians *in certain circumstances* to dispense drugs or other medical devices when it is for the convenience of the patient, is to be guarded. This is in no way unethical and has served the patients and physicians of Maryland well.

Generalized dispensing of drugs in most urban and suburban areas in Maryland is of questionable medical need, and any claim to patient exploitation by pharmacies or other retail services surely can be met by other than physicians. If this business venture is of questionable propriety for all physicians, then of even more questionable propriety would be a medical organization or society (whose job it is to advise its members about proper professional behavior) condoning or encouraging this activity.


**ad·dict** \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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## Leadership Training for State and County Leaders

The American Medical Association Auxilary Leadership Confluence I was held on October 9 to 11, 1988, at the Drake in Chicago, to provide leadership training and program information to state and county auxiliary leaders, who then return home to teach other leaders. Based on total state membership, Maryland is entitled to send four county presidents-elect to each Confluence.

Program content was a blend of consultations, plenary, and breakout sessions. Speakers and resource personnel are experts in their respective fields. Participants were offered plenary sessions and consultations prior to the official opening of the Confluence. An offering of eight breakout sessions was designed to strengthen attendants' leadership skills and abilities.

Plenary sessions for state presidents and presidents-elect were held on Sunday, October 9. Eva Edmonds, Maryland state president, and Vicki Cameron, Maryland state president-elect, attended. These sessions were planned to allow state leaders the opportunity of interacting with the national leadership and with one another as well as to update participants on national plans.

Plenary sessions also were held for county participants. Nancy Lisle, president-elect of Baltimore County, and Rhonda Gaba, president-elect of Allegany County, attended. National leaders offered suggestions and directives that participants found important as county leaders. Because they were assigned to tables, they had the opportunity to interact with participants of other like-size auxiliaries.

Beside consultations on effective programming, membership, and team efforts between medical societies and auxiliaries, breakout sessions covered: how to run a meeting, writing it right, AMPAC, networking, the health of adolescents, AIDS education for youth, teen suicide prevention, and intergenerational programming for older Americans. Participants selected those sessions of interest.

Exhibit space was available for each state. States select one *county* project; Washington County's "Elder Love" was on display. This is an excellent way to share ideas and to obtain new ones.

The ideas and information garnered from Chicago then were shared with our own state and county leaders and chairmen at the State Auxiliary's Fall House of Delegates, October 18 and 19, 1988 at the Turf Valley Hotel and Country Club. Mrs. Keith Edwards of Bluefield, West Virginia, AMA Auxiliary Eastern Regional Director, spoke on motivation and leadership. Workshops on legislation, AMA-ERF, membership, and health projects were held for state and county leaders. State and component chairmen shared round-table discussions during the final luncheon to encourage interaction and exchange.

Confluence II will be held at the Drake in Chicago, February 5 to 7, 1989. Again, county presidents-elect, state presiedent-elect, and the nominated state president-elect will attend. Formats are the same for both sessions of 2 1/2 days of quality leadership training for Auxiliary leaders.

Although sessions are stimulating, it is even more exciting to meet other participants and to share common concerns and ideas. We returned home enthused with ideas, leadership strengths, and confidence to begin our year of Auxiliary.

*Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland, Mrs. Eva Edmonds, President; Mrs. Betty J. Molz, Editor.*

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**In the Matter of**
**Jeffrey Schimandle MD**
**Before the**
**Commission on Medical Discipline**

**Order for**
**Emergency Suspension of Right**
**to Practice Medicine**

Based on information received regarding the practice of Jeffrey Schimandle (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

**Findings of Fact**

Based on all the information known and available to it the Commission has reason to believe that:

1. Respondent is an unlicensed medical practitioner who is registered with the Maryland Board of Medical Examiners (P - 1517 through the University of Maryland Hospital. He is in the second year of a residency program, in orthopedic surgery at University of Maryland Hospital.

2. In July, August, and September 1987, Respondent was practicing at ST. Agnes Hospital as part of his University of Maryland residency program. It was noted during that time that an unusually large number of patients were receiving Demerol.

3. In October, 1987, nursing staff at University of Maryland Hospital noted that Respondent was requesting unusually high dosages of Demerol for certain patients to be injected by Respondent, and there was reason to believe that at least some of the Demerol being provided to Respondent was not actually being injected into the patients.

a) Patient A, admitted on October 6, 1987 with a diagnosis of an open fracture of the right fibula and tibia, and who was under the care of Respondent, was reported by the Emergency Room nurse to have received the following dosages:

16:15 75 mg Demerol, IV
17:20 125 mg Demerol, IV
18:15 50 mg Demerol, IV
19:40 150 mg Demerol, IV

The last three dosages were given by Dr. Schimandle. The Patient arrived on the floor at 20:40.

At 20:50, he was purportedly given 150 mg Demerol IV by Respondent. At approximately 22:35, Respondent returned to the floor and asked for 150 mg of Demerol to give to Patient A, which received by Respondent, taken down the hall, brought back and then purportedly administered IM at his order. Within two hours, however, the patient was requesting analgesia. At 01:40 the patient was given 100 mg Demerol and Vistaril 50 IM.

b) On October 6, 1987, Patient B was noted as having received the following administrations of Demerol:

19:05 Demerol 100 mg IVP
20:00 Demerol 150 mg IVP
21:30 Demerol 150 mg IVP

All of the Demerol was requested by Respondent, and provided to him by nursing staff for injection by him. The injections were not witnessed. Contrary to what would be expected of a patient receiving the above medication, Patient B was noted by nursing staff to be alert at 1905, 2000, 2130. At or about 2300 the patient ambulated to the sunporch and read a magazine having requested, but not received, pain medication.

c) Respondent received Demerol 75 mg to be administered IVP to Patient C. In the course of administering it he turned his back to the nurse. The nurse saw Respondent's right hand, the hand containing the syringes, move to the area of his left side breast pocket. At that time, she hear the sound of glass and Respondent looked at his pocket.

d) During the weeks of October 6 - October 21, REspondent ordered unusually large amounts of Demerol for his patients, which were taken by him for administration by him in one of the following two ways. He either administered the Demerol out of the presence of nurses or administered it in the presence of a nurse in such a way that the nurse was unable to observe all his actions in the course of the administration. It is contrary to usual hospital practice for a resident, rather than a nurse, to administer medications.

e) On October 19, 1987, at approximately 23:50, Respondent requested and was given a syringe containing medication. He had requested the medication for purposes of a dressing change on a patient whose dressing had in fact been changed 1.5 hours earlier. After receiving the syringe, Respondent was observed with the syringe cap in his mouth. When the Respondent came into the patient's room, he handed a nurse the syringe and told the nurse to administer it IM.

f) At approximately 00:20 Respondent requested a nurse to get Demerol 50 mg for Patient D. The nurse brought it to the room. Respondent left the room with the syringe, came back, and asked the nurse to give the medication. Approximately 10 minutes later, Respondent was observed standing at the nursing station sleeping on his feet.

4. On February 29, 1988, at University of Maryland Hospital, Respondent requested and received from one nurse, Demerol 100 mg at 11 p.m., another Demerol 100 mg at 11:30 p.m., and another Demerol 100 mg at 12 midnight, all for Patient E. Respondent informed the

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

nurse as to each of the 11 and ":30 doses that he administered 75 mg and wasted 25 mg after the nurse gave him the 100 mg Demerol requested at midnight, Respondent came back and told the nurse that he only give the patient 25 mg and wasted fluid from the syringe in her presence.

Earlier that same evening, at around 8:30 p.m., Respondent requested 200 mg of Demerol from a different nurse for the same patient. He gave the patient a 25 mg push from one syringe and ask the nurse to give 75 mg from the second syringe IM. She suggested using the remaining 75 mg from the first syringe and did so. She then returned the second syringe to the medicine cart. Less than two hours later Respondent requested another 100 mg of demerol for the patient. She gave Respondent the syringe with 100 mg that had previously been drawn up. He approached her a few minutes later with the syringe she had given him and said he had accidentally stepped on it and cracked it. He said he needed another 100 mg of Demerol. She gave it to him and he returned it a few minutes later saying he had given the patient 75 mg.

The patient did not appear drowsy or lethargic during that time.

As of March 1, 1988, there was only one physician's order for Demerol written in Patient E's chart, the 8:30 p.m. order by Respondent. On March 3, 1988, the chart was reviewed again and at that time it contained no physician's order for Demerol.

5. In April, 1988, Respondent was assigned to the James Lawrence Kernan Hospital (Kernan") as part of his residency rotation.

6. At Kernan, Respondent told a new nurse in the Intensive Care Unit ("ICU") that a patient needed IV pain medication but he would give it since Kernan nurses could not give IV push medicines. In fact, ICU nurses at Kernan are authorized to and do give IV push medicines.

7. In a number of instances, staff at Kernan noted that Respondent would awaken patients to ask them if they needed pain medication, which he then often administered himself.

8. In a number of instances, Respondent requested what staff at Kernan considered to be excessive Demerol for particular patients given the circumstances.

a) Patient F was awakened by Respondent who then told the nurse to administer an IV narcotic. The nurse refused since the patient had given no indication that she needed pain medication.

b) Nurses on the Adult Unit customarily did dressing changes after giving IM Demerol. When Respondent did the dressing changes, he gave Demerol IV addition to IM.

c) Patient G was give IV Demerol 25 mg by Respondent and Demerol 75 mg IM and Vistaril by nurse prior to the doctor's manipulation of knee. One hour later, the patient was given Demerol 100 mg and Vistaril 50 mg IM by Respondent.

d) Patient H was given 2 injections of Demerol by Respondent: Demerol 100 mg IM and one hour and 20 minutes later Demerol 150 mg.

e) Patient I who had a spinal fusion, was medicated in the ICU at 8:15 p.m. by a nurse. At 10:15 a nursing note stated "no complaint for past 2 hours. Dr. Schimandle aware . . . medicated with Demerol 25 mg IV and 75 mg IM per order Dr. S for low back pain.

f) On one occasion, Respondent instructed the nurse to give 50 mg IM with Versed 5 mg IM prior 100 mg to give an Iv push while he had the patient off the unit for a dressing change. The nurse questioned that the patient would need more medication after DEmerol and Versed. Respondent got Narcan from the pharmacy in case of need. When he brought the patient back to the unit, he gave the nurse 1/2 vial of Demerol to discard. According to the nurse, the discarded fluid did not smell like Demerol.

9. On two occasions, Respondent was found in the medicine cabinet on Al unit by nurses returning to the nurses section. (The outer cabinets had been left unlocked but the narcotic cabinets inside were both locked.)

10. One evening, while engaged in casual conversation with a nurse in the ICU, Respondent removed a 3cc syringe with about 2cc's of clear liquid in it from his right hand pocket and put it in his left hand pocket. There was a needle disposal nearby at the time, but he did not use it. It is not a usual practice for physicians to carry syringes containing liquids in their pockets.

11. On May 27, 1988, Patient J complained that Respondent stopped in her room the previous day and, questioned her as to whether she had used Demerol in the past week and the past month. When she told him that she had not, he told her that he needed a urine specimen from her which he then took from the room. There is no record on the chart of this urine having been sent to the lab and the lab did not receive it. The specimen was collected by Respondent shortly before he was to attend a meeting with the Medical Director of the hospital which had been set up for the purpose of discussing concerns which had been brought to the Director's attention about the Respondent's practices with respect to Demerol.

12. Respondent's handling of Demerol which is a schedule II controlled dangerous substance, is contrary to public health, safety, and welfare.

a) If the Demerol requested by Respondent is actually being administered to patients as represented by him, Respondent is endangering the health, safety, and welfare of patients by prescribing Demerol in quantities which exceed the standard and recommended dosages or in circumstances where it is not indicated at all.

b) If the Demerol being ordered by Respondent is not being administered to patients as represented by him, Respondent is en-

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dangering the health, safety, and welfare of the public by making Demerol available for his own use or the use of others outside the controls that have been established for the protection of the public.

c) In any event, Respondent's failure to act in such a way that patient's records accurately reflect the amount of drugs that have been administered to them is contrary to the health, safety, and welfare of patients.

**Conclusion of Law**

Based on the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively required emergency action in this case, pursuant to State Government Article, 10-405(b), Annotated Code of Maryland.

**Order**

It is this 21st day of June 1986 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, 10-405 of the Annotated Code of Maryland, Respondent's registration to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the Respondent.

*HILARY T. O'HERLIHY MD,* **Chairman**
**Commission on Medical Discipline**

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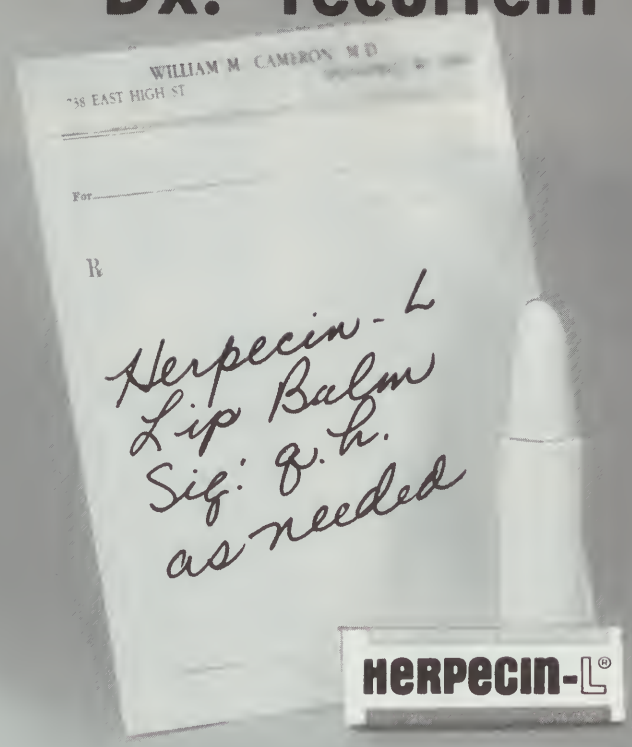
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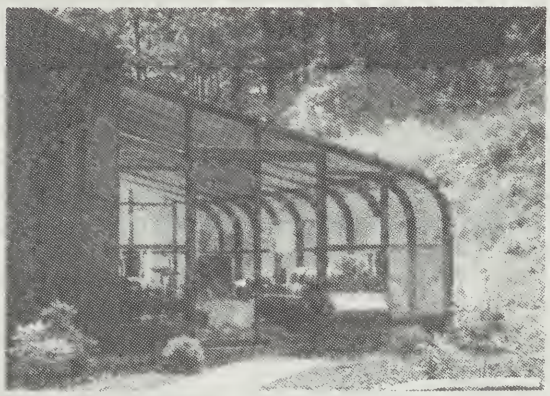
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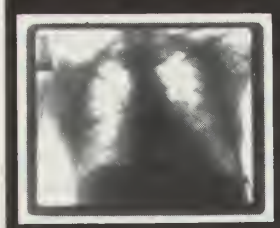
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### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. Sponsored Continued Education Activities for 1988-1989. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Nov 4 Management of Complicated Retinal Detachments**. Fee: $175 ($90 those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Nov 5-6 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization**. Fee: $390; 14 AMA Cat I credits. Info: J. Ryan 301-955-2959.

**Nov 18 Planning and Implementing a Smoke-Free Policy in a Health-Care Facility**. Fee: $95; AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Nov 18-20 Update in Common Pediatric Endocrinology Disorders and Developmental Disabilities** (The Maryland Chapter of the American Academy of Pediatrics Annual Fall Mtg.), The Radisson Annapolis Hotel. Fee: three days $150; single day $50. Info: F. Boling 301-955-2959.

**Dec 1-2 PHS Policy on the Humane Care and Use of Laboratory Animals**, Stouffer Harborplace Hotel, co-sponsored with NIH. 11.5 Cat I AMA credits. Info: J. Ryan 301-955-2959.

**Dec 5-7 Interventional Neuroradiology: Current Practices and Techniques**. Fee: $550 physicians, $350 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-2959.

**Dec 8-10 First Annual Wilmer Institute Current Concepts in Ophthalmology**. Fee: $250, $200 (those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Mar 6-8; Jun 19-21 An Advanced Pediatric Life Support Course.** Fee: $445; 20 AMA Cat I credits. Enrollment will be limited. Info: C. Goodell 301-955-2959.

**30th Annual Postgraduate Institute for Pathologists in Clinical Cytopathology**, solely for Board Certified (or qualified) pathologists as a subspecialty residency. 152 AMA Cat I credits in two courses, **both of which must be taken**.

**Feb-Apr Home Study Course A** - personal reading and microscopic study at own lab in preparation for Course B.

**Apr 24-May 5 In-residence Course B**, lecture series, laboratory study, and clinical experience at The Johns Hopkins Medical Institutions, Baltimore.

Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb-Apr preceding Course B in Baltimore, Apr 25-May 5. Participants *outside* the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and preregistration advised ASAP: preregistration must be completed **before Mar 24, 1989**, unless by special arrangement. Info: J.K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205 USA.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: C. Jarvic 301-955-8450.

**Basic Practicum** for the novice ultrasonographer Nov 14-18. Fee $460; AMA Cat I credits.

**Advanced Practicum in Ultrasound** Dec 5-9. Fee: $460; 40 AMA Cat I credits.

**Visiting Physicians** - offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. Fee: $460; 40 AMA CAt I credits.

**Johns Hopkins Medical Grand Rounds** - Accredited audiovisual continuing education series of case discussion for clinicians; 30 topics/year in 5 bimonthly programs. Individual and group subscriptions; 40 AMA Cat I credits. Info: 301-955-3988.

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### University of Maryland School of Medicine

**CME Courses:** For each course additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956).

**Nov 4-5 Second Medical Perioperative Management Postgraduate Course**, Harbor Court Hotel, Baltimore. Fee: $165; approx 10 AMA Cat I credits.

**Nov 5 A Brief Course in Brief Psychotherapy**, UMAB. Fee: $100; approx 6 AMA Cat I credits.

**Nov 16 Dean's Conference #3: Surgery**, UMAB. Fee: $25; 6 AMA Cat I credits.

**Nov 18-20 Rigid Fixation of the Craniofacial Skeleton**, Sheraton Inner Harbor Hotel, Baltimore, sponsored by MIEMSS. Fee: $425 physicians & dentists, $250 residents & fellows, $50 optional laboratory session; 19 AMA Cat I credits. Info: T. Young 301-328-2399.

**Dec 1-3 Eleventh National Trauma Symposium**, Baltimore Convention Center. Info: K. Unitas, MIEMSS 301-328-2399.

**Dec 9 Diagnosis and Management of Osteoporosis**, Marriott BWI Airport, Baltimore (originally scheduled for Nov 17). Fee: $35; 4 AMA Cat I credits.

**Dec 14 Dean's Conference #4: Anesthesiology**, UMAB. Fee: $25; 6 AMA Cat I credits.

**Jan 19-20 Behavioral and Developmental Problems in the School-Age Child**. Fee: $150; 11 AMA Cat I credits.

**Jan 25 Dean's Conference #5: Psychiatry**, UMAB. Fee: $25; 6 AMA Cat I credits.

**Feb 5-6 Cardiology at Wisp**, Wisp Ski Resort, Deep Creek Lake, MD. **POSTPONED**

**Feb 23 Dean's Conference #6**: TBA, UMAB. Fee: $25.

**Visiting Professor Program** - Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentation hosted by the University's clinical departments. Hour-for-hour AMA Cat I credits available. Brochure available.

**Advanced Trauma Life Support Provider/Instructor Programs** sponsored by University of Maryland/MIEMSS. Fee: $350-500; 16-22 CMD Cat I credits. Info: Melody Nelson 301-328-2919.

**Nov 16-17 - Provider**

**Dec 15-16 - Provider**

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### Miscellaneous Meetings

**Nov 4 Co-dependency and Recovery: From Survival to Genesis**, National Press Club Conference Center (14th & F Streets NW, Washington, DC 20045), 8 am - 4:15 pm. Fee: $90 (lunch not included); 5.5 Cat I credits. Info: A. Cannemela 202-965-8450, The Psychiatric Institute Foundation.

**Nov 4 Clinical Management of Fees in Psychothereapy and Psychoanalysis**, noon - 1:15 pm (lunch provided), The Psychiatric Institute of Washington Gymnasium, 4460 MacArthur Blvd NW, Washington, DC 20007. Fee: none, but registration required - seating limited to 75 registrants; 12 Cat I credit. Info: A. Cannamela 202-965-8450.

**Nov 5, Jan 7, Mar 4, or May 6 Impact of Substance Abuse on Family Members**, Westpark Hotel, 1900 N Fort Meyer Dr., Rosslyn, VA. Fee: $50, $25 each additional family member (includes lunch & parking). Info: A. Cannamela 202-965-8450, The Psychiatric Institute Foundation of Washington.

**Nov 9-11 First National Cholesterol Conference**, Hyatt Regency Crystal City, Arlington, VA. Fee: $185, student registration $25 (conference sessions only). Info: The National Cholesterol Conference, 4733 Bethesda Ave. - Ste 530, Bethesda, MD 20814 (301-951-3275).

**Nov 11-13 Advanced Trauma Life Support Instructor Course**, Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $600; 26 Cat I credits. Info: D. Soto 202-784-2074.

**Nov 12 The Interface of Medicine and Psychiatry**, St. Joseph Hospital, Towson, MD. Fee: $35 physicians, $25 house staff, nurses, allied health personnel; mail registration with checks payable to Educational Fund, St. Joseph Hospital by Nov 1; after Nov 1, there is a $5 late fee. 6.5 AMA Cat I credits; 6.0 AAFP Prescribed hours. Info: A. Cronin 301-337-1113.

**Nov 12-13 Fetal Cardiology**, Key Bridge Marriott, Arlington, VA, sponsored by the Div of Pediatric Cardiology, University of Maryland School of Medicine. Info: Terry Young 301-328-2399.

**Nov 15 Update on Dyslexia: 1988**, cosponsored by the Philadelphia Pediatric Society and the Greater Philadelphia Branch of the Orton Dyslexia Society to be held at the College of Physicians and Surgeons in Philadelphia, 6:30 p.m., followed by dinner. Preregistration required for dinner. Fees: $30 for lecture & diner, $15 for lecture; CEU credits through the University of Pennsylvania School of Medicine. Info: 215-581-6257.

**Nov 17 Bone and Joint Disease in the Elderly**, Maryland General Hospital, C.W. Stewart Memorial Lecture, 3 p.m.

**Nov 19-20 Regional Review Course in Hand Surgery**, Washington, DC. Fee: physicians $200; residents, fellows, & allied health professionals $100; 12 AMA Cat I credits. Info: American Society for Surgery of the Hand, 3025 S. Parker Rd. - Ste 65, Aurora, CO 80014.

**Jan 21 Tenth Anniversary conference: Daycare in the 90s: A Controversial Reality,** sponsored by the Maryland Interdisciplinary Council for Children and Adolescents, held in the Ford Bldg of the Sheppard & Enoch Pratt Hospital from 9 a.m. to 12:30 p.m. (snow date is January 28). Registration requests: Dr. O.M. Taube, Program Chairperson, Greenspring Pediatric Associates, Sinai Hospital of Baltimore, 5105 Lanier Ave., Baltimore, MD 21215 (301-578-5800).

**Feb 3-5 Advanced Trauma Life Support Instructor Course**, Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $600; 26 Cat I credits. Info: D. Soto 202-784-2074.

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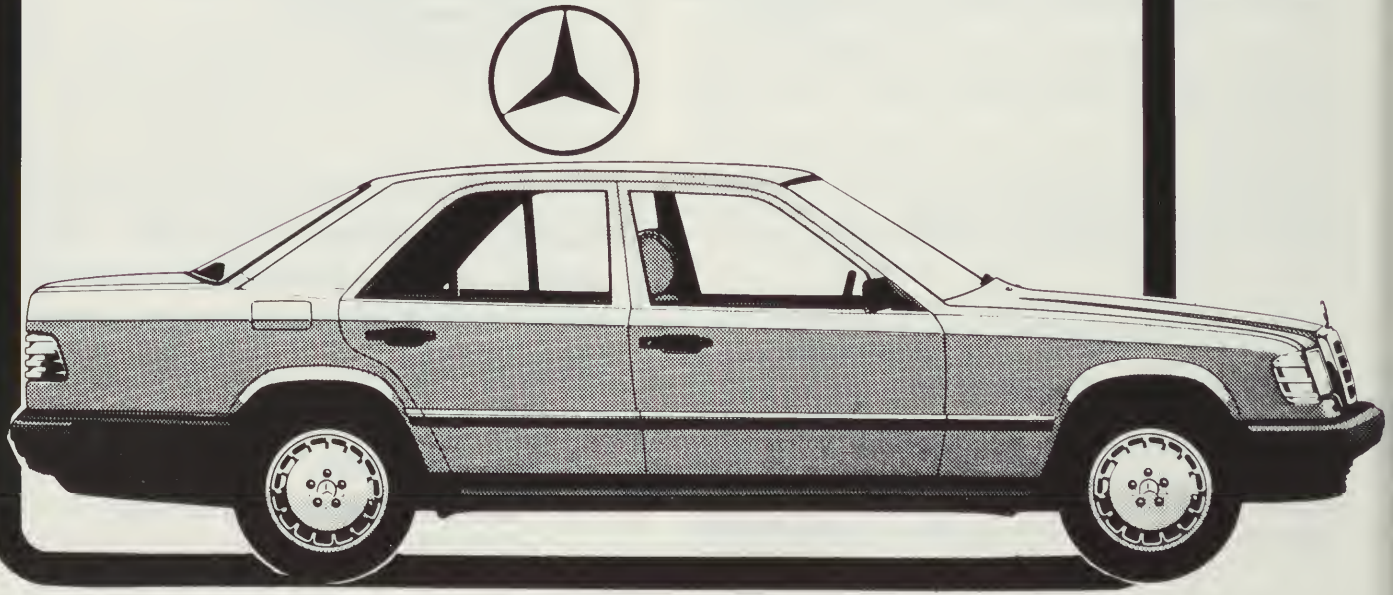
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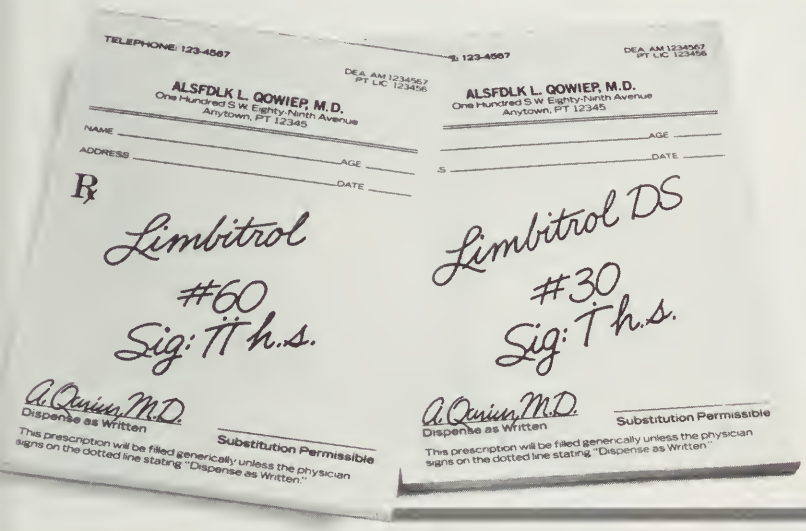
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**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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**Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:*** **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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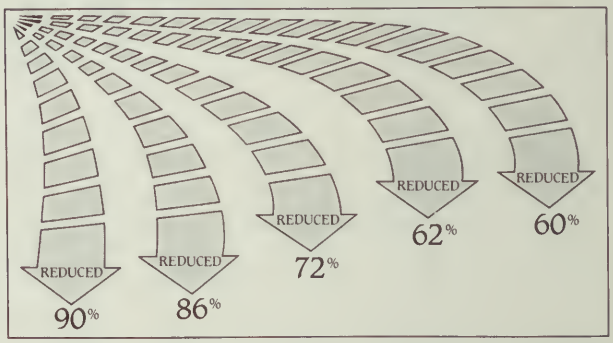
# See Improvement In The First Week...[1]

## And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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# Limbitrol® DS

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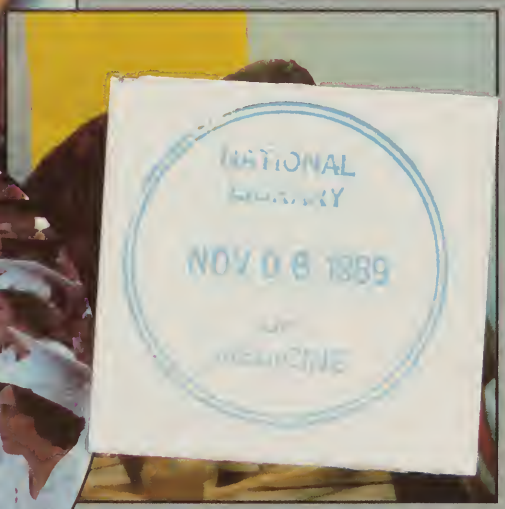
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MARYLAND MEDICAL JOURNAL















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# MMJ

## Adolescence Today:
## Youth in Tough Times

December 1988

# Maryland Medical Journal

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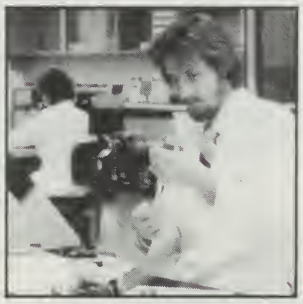
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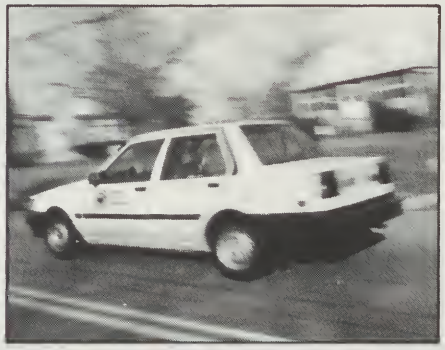


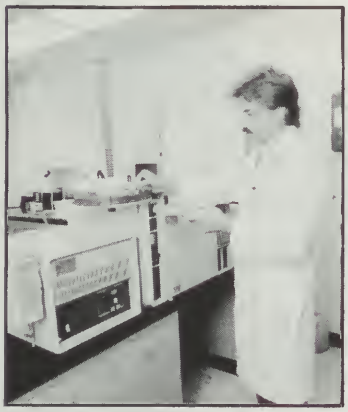
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December 1988

# Maryland Medical Journal

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*Dedication of the Krause History of Medicine and Rare Book Room, September 24, 1988. From left, Drs. Michael Dobridge, George Malouf, and Nancy Nichols.*




*Square grand piano and violin, gift from the home of Miss Louise Krause.*

Michelle Dunn



*Participants in Arts Medicine Weekend. From left: Susan E. Harman, David Fetter, Jeffry Palmer MD, Dore Naunton OTR, Alice G. Brandfonbrener MD, and Melissa McDiarmid MD.*

# Ceremonies Rededicating the Renovated and Restored Library

## of the Medical and Chirurgical Faculty

**September 24, 1988**

**From the Meeting of the Council of the Medical and Chirurgical Faculty, 10 p.m.**

*Dr. Lee-Llacer, Chairman of Council:*

I call on Dr. George S. Malouf, Jr. for a special report of the Faculty's Ad Hoc Building Committee, and I invite our President, Dr. Dobridge, to respond to the report.

*Dr. Malouf, Chairman of the Ad Hoc Building Committee:*

Mr. President, Mr. Chairman, Officers, Members of Council, Fellow members and Friends. On behalf of Drs. Bernard S. Kleiman, Reynaldo L. Lee-Llacer, and P. Gregg Rhodes (current members of the Ad Hoc Building Committee), and on behalf of all the members who have served on the building committee, I have the great honor of announcing the completion one of the Faculty's greatest undertakings, and later I will present to you and our members our completed "new building" and our renovated library.

With your permission, I offer a brief reflection about today's festivities.

Drs. Upton Scott, John B. Davidge, Samuel Baker, Charles Frick, Samuel Chew, Eugene Cordell, William Osler, Aaron Friedenwald, William Welch, John Ruhrah, and Louis Krause. These may not be household names now, but in their own times during the past 190 years, each was a recognized and honored leader of the medical profession in Maryland. These names are only the beginning of our history in Maryland, because our profession is an ongoing entity, a progression of brilliant biographies being lived and still to be written.

With the rededication of our renovated library, we assure these names and their accomplishments shall not be lost, but will form a piece of our history. The rest is yet to come.

*Dr. Dobridge, President:*

Thank you Dr. Malouf. As President of this Faculty and on behalf of its 7,000 members I am honored to accept the report of the Ad Hoc Building Committee.

Over the past several years, as a member of Council, as Chairman of Council, as President-elect, and now as President, I have witnessed the hard work of your committee in the construction of our new building (which we so proudly dedicated at this time one year ago) and, through this past year, the renovation of the older building, especially our library (which we are now completing), whose dedication we now celebrate.

As Faculty President, I have come to realize that we walk in a hallowed space. The great leaders Dr. Malouf just mentioned and many others walked these halls. Most of us would not be here today were it not for the wisdom and foresight with which these physicians guided and governed this Association.

We have this building, our library, and museum with its wealth of resources thanks to the generosity of the physicians who came before us and who thought enough of the future of medicine to leave us this wonderful legacy. The future they planned and worked toward is our present. The library they established 158 years ago remains today as one of the most tangible benefits that this Faculty offers its membership. The library's services, bibliographies, and copies of articles are requested by more individual Faculty members than are any other services the Faculty offers.

Now we stand in the place of those who gave us these treasures. In accepting this renovated building and library today and in rededicating it, we commit ourselves to preserve and pass on to future generations of Maryland physicians the great treasures we have received. We further commit ourselves to serve the profession of medicine in such a way that the legacies of our experiences can be added to stores of knowledge that will be available to guide physicians who will follow us.

**From the Dedication Ceremony, 12:45 p.m.**

*Dr. Malouf (on the grand stairway to the Library):*

I am Dr. George Malouf, Chairman of Med-Chi's Building Committee. I invite our President, Dr. Michael Dobridge; our Library Committee Chairman, Dr. Nancy Nichols; and the honorable delegates Tony E. Fulton and Donna M. Felling from the Maryland General Assembly to join me here for the ribbon cutting ceremony.



Michelle Dunn

*From left: Delegates Donna M. Felling and Tony E. Fulton, Drs. George S. Malouf, Michael Dobridge, and Nancy Nichols.*

Michelle Dunn



*Guests in the Krause History of Medicine and Rare Book Room.*

Michelle Dunn



*Miss Louise Krause and Dr. Michael Dobridge.*

Michelle Burke



*Dr. Dobridge and Dr. Alice G. Brandfonbrener, Director of the Medical Program for Performing Artists, Northwestern Memorial Hospital, Chicago.*

*Dr. Malouf (after the ribbon cutting, guests assembled in the Krause History of Medicine and Rare Book Room):*

Dr. Dobridge, on behalf of the Faculty's Ad Hoc Building Committee and of all the members who served on that Committee, I present to you and to the members of our Association our renovated and restored Faculty Building.

*Dr. Dobridge:*

Thank you Dr. Malouf. The Faculty's Library and History Committee is charged with responsibility for caring for and preserving all the Faculty's books and printed and written materials, as well as our art objects, portraits, instruments, and historical materials. I therefore now call upon the chairman of that committee, Dr. Nancy Nichols.

Dr. Nichols, you follow in the footsteps of many great physicians who have chaired this Faculty's Library and History Committee. It is with great honor that I accept this renovated library and turn it over to you and your committee to be used to the service of our membership and to be protected and preserved as a heritage for the generations of physicians who will follow us.

*Dr. Nichols:*

Thank you Dr. Dobridge. Fourteen years ago, in 1974, when my predecessor as Chair of the Library and History Committee, Dr. Louis A.M. Krause, retired from medical practice, the Council of this Faculty passed a resolution stating that at such time when the Faculty established a history of medicine and rare book room, that room should be named in honor of Dr. Krause. The next year, shortly after Dr. Krause's death, the same resolution also was adopted by the House of Delegates. The time has come to fulfill those promises. Today we are honored to have with us Ms. Louise Krause, Dr. Krause's sister. Ms. Krause, would you please stand. Ms. Krause has generously helped furnish this room with the gift of this square grand piano on which she and her brother Louis learned as children. Ms. Krause also has given us her brother's violin and the mementos and documents you see in the exhibit cases. Upon her brother's death in 1975, Ms. Krause gave the Faculty her brother's collection of historic medical books, many of which are shelved in these bookcases. Please join with me in thanking Ms. Krause.

Dr. Lester A. Wall, Jr. was a lifelong friend of Dr. Krause. Dr. Wall, an internist, received his MD from the University of Maryland in 1941. In 1975, he wrote Dr. Krause's obituary. He has left his retirement in the south to be with us today to speak about the man whom we honor. Dr. Wall.

*Dr. Wall (excerpts):*

**Dr. Louis A.M. Krause, 1896 - 1975**
A Legend in His Time

He stood alone, a giant of a man, a scholar, a scientist, a great and glorious physician, and a warm intensely human and humble person.

Louis August Moyer Krause on died on July 27, 1975. But the impact of this quiet man on the lives of innumerable people continues to be the enduring tribute to a life that was a model of dedication, not only in his pursuit of excellence but also in his profound awareness of the individual and his understanding of the common man.

As a bedside physician he had no peer. There he demonstrated the astuteness and prowess that are the hallmarks of a truly great physician. His history taking was searching and perceptive. His physical examinations were models of excellence and made exciting by his anthropologic analogies. His analyses were deep and penetrating and laced with references to current and classical literature.

Above all, he was kind and good and radiated this warmth and concern to his patients. Compassion and understanding were his in abundance. He frequently would say "Our greatest influence will come from our love of mankind." He loved to tell the story of the good Samaritan and cited it as a moving example of compassion; it was synonymous with his way of life.He was a legend in his time.

Small wonder that after my service in the army during World War II, I jumped at the opportunity to be one of his medical residents of Lutheran Hospital. I was scheduled to go to the Los Angeles County General Hospital, but when this option became available, I seized it. For three years I made rounds with him and wrote down the pearls that were the treasures of his learning and experience.

Dr. Krause's talents surfaced early. He was the Gold Medal Winner of his class when he received his MD degree from the University of Maryland in 1917. He taught at the University Hospital, Mercy Hospital, Baltimore City Hospital, and, in fact, at most of the hospitals in our city. Eventually, he became Clinical Professor of Medicine and the Professor of the History of Medicine at the University of Maryland. He was also governor for Maryland of the American College of Physicians and President of the Baltimore City Medical Society. He served in both World Wars with distinction, and was Chief of Medical Services at Walter Reed and Butler General Hospital. Many other honors and accolades came his way, but he was reluctant to talk about them.

The Scholar was always in evidence. He loved to sit with his friends, enjoying some tea and raisin bread, and talk about his archaeologic expeditions to the Mideast. As he traced his steps to distant lands, he would pause at each place or civilization along the way to review their origins and impact on contemporary society. The breadth of the man would come sharply into focus, and one would marvel at the depth of his learning and how adroitly he placed information in perspective. Who could forget his exciting and provocative discourses on Medicine in the Bible, salt, old age and the journey of the Queen of Sheba from the Kingdom of Yehman to the Court of King Solomon? These invitations to learning were stimulating, rewarding experiences cherished by all who knew him.

Dr. Krause was a family man. His father was a superb cabinet maker who worked at the well-known Potthast firm. His devotion to his dearly loved mother was tender and touching. He adored his sister, Louise, and she him. No one know him as well; no one took care of him as devotedly. In the last months of his illness she was with him day and night. Never, ever did she complain.

To visit with his family was to appreciate his reference to the home "as a fountain of all spiritual values." It was there he kept his many books, his beloved Bibles, his Josephus. He built an extension from his bedroom where he placed his telescopes and studied the stars. His detailed descriptions of the heavens were impressive reminders that his knowledge of the heavens was hardly casual.

Dr. Krause was the prototype bibliophile. For 16 years he served as chairman of this library. He was proud to make it available to visiting scholars and others interested in learning. He used to say, "Every book we read should become a rung in the ever ascending ladder by which we climb to knowledge." And, "Our library is like a temple that should be consecrated as a cathedral,



Michelle Dunn

*Dr. Lester A. Wall, Jr., and Dr. Nancy Nichols.*

dedicated for the advancement of sound knowledge and the study of man, his physical, mental, spiritual and social nature." Indeed, his books were his companions and his friends, to be surrounded by them was pure joy. This room dedicated to his memory would have made him truly happy. If, somehow, it could instill in those who use it some of his beautiful attributes, values, and talents then it most certainly would be an enduring tribute to this remarkable man.

*Dr. Dobridge:*
I have here a plaque that will stand near the entrance to this room. It reads:

> *The Louis A.M. Krause, M.D. History of Medicine Room Dedicated September 24, 1988. This room is dedicated to Dr. Louis A.M. Krause, 1896-1975, in recognition of his service as Chairman of this Faculty's Library and History Committee, 1952 - 1962, and of his devoted efforts in behalf of his fellow physicians which he performed without thought of recompense except that of a job well done. Medical & Chirurgical Faculty of the State of Maryland. Resolution passed by Council, November 21, 1974. Resolution passed by House of Delegates, September 12, 1975.*

Ms. Krause, the members of this Faculty are extremely proud of this room. We are even more proud that it bears your brother's name. He was our teacher and colleague. He was a leader in the profession of medicine. We are grateful for his influence that has brought us to this point.

*Dr. Nichols:*
Almost 160 years ago when this library was founded by Dr. Samuel Baker it was an experiment of new ideas. Faculty members from Cumberland and Salisbury attending the Faculty's Annual Meeting were allowed to borrow up to six books for return at the next year's annual meeting. Later provisions were made for mailing books to rural physicians. The Faculty's library continues to be involved in new ideas. One such new activity revolves around the developing specialty of music medicine, caring for the medical problems of performing musicians.

*Dr. Dobridge:*
A few years back, a bibliographic essay appeared in our *Maryland Medical Journal* on diseases of performing musicians. The article was written by a member of the library staff, and its excellence drew worldwide attention to the Faculty. In the years since, the bibliography has been regularly updated. As a consequence of the international correspondence this work has fostered and the research involved in maintaining the bibliographies, the Faculty Library has compiled a large and respected collection of the world's literature in this field. Given the existence of this great resource and acknowledging the growing number of researchers who have expressed the need for an international clearinghouse of literature related to the medical problems of musicians, I have directed that the Faculty's library should function as such a clearinghouse.

Further, I have appointed an advisory committee of physicians who have expertise and interest in the field of music medicine to guide the library committee and staff in building, maintaining, and promoting this special collection. The members of this committee are Melissa McDiarmid MD, of the Division of Occupational Medicine of The Johns Hopkins University School of Hygiene and Public Health, who will serve as Chair;

**International Clearinghouse on Music Medicine**

The designation of the Faculty Library as the International Clearinghouse for Resources and Publications on the Medical Problems of Musicians is a significant step in resolving a problem inherent in the development of the new specialty field of music medicine, the lack of a centralized information source.

The clearinghouse will be a resource to be used and contributed to by physicians, musicians, and researchers of all types. Contributions of written or audiovisual material in the field from authors, publishers, and organizations will be most welcome. Historical and rare materials are also of interest. As the clearinghouse grows, research notes, manuscripts, and other archival materials from leaders in the field will become important. The clearinghouse plans to provide bibliographies, anthologies, lists of conferences and clinics, and other services in both print and computer formats.

An advisory board of physicians has been appointed to assist in the development of the clearinghouse. Members were chosen because of their ties to the Baltimore Symphony Orchestra, The Johns Hopkins Medical Institutions, the American Occupational Medical Association, and the International Arts-Medicine Association, as well as their experience and interest. Beside advising on clearinghouse matters, they will work on coordination with other local organizations, such as the Arts Medicine Group, on music medicine activities and raise awareness in the both the medical and music communities.

*SUSAN HARMAN*
Associate Librarian; Clearinghouse Coordinator

Harold Bob MD; John DeHoff MD; Christian Mass MD; Roy Scholz MD; and Jeffrey Palmer MD. This new committee has not met. Dr. McDiarmid is present, and I invite her to say a few words.

*Dr. McDiarmid:*

My interest in music medicine is from the perspective of my specialty, which is occupational medicine. Music medicine is finding its way to the forefront of medicine. Slowly, perhaps, but it *is* happening.

Until now, information on this specialty area has been scattered almost anywhere you could imagine: in musical literature, medical literature, and even in the popular press! However, with the establishment today of an international music and medicine clearinghouse at Med Chi, we finally will have a single source to turn to for answers to the questions that plague musicians and the physicians who treat them.

Beginning with the current nucleus of about 500 reprints and a number of bibliographies available, the Faculty's clearinghouse eventually will include originals of everything published on the topic and will be available in both printed and computerized formats to interested researchers, musicians, physicians, and others.

The advisory committee, along with local and national representatives, will assist in the development of the clearinghouse and policies to guide its operation. We take pride in the designation of this unique and much-needed clearinghouse for music medicine and look forward to its future growth.

In honor of this occasion, and in appreciation for the Ms. Krause' gift of the piano and violin, we will now enjoy music performed by Nancy Stagnitta (flute) and Bart Bosma (guitar), students at the Peabody Conservatory.

Michelle Dunn



*Nancy Stagnitta and Bart Bosma*

**Rededication of the Faculty Library**

On September 24, 1988 the remodeled and expanded Faculty Library was formally rededicated. This culminated a year-long project, doubling the existing office space, creating a room for the history of medicine, and restoring an original reading room of the Faculty to its original splendor.

Both the technical services and public services departments were moved to new quarters on the third floor along with the collection of recent textbooks. The reading room was restored to its original location as the Aaron Friedenwald Room, as it was named in 1908.

The second floor of the Faculty building (previously the library) was remodeled with custom-made cabinets to house the history of medicine collection. This room was formally dedicated in memory of Louis A.M. Krause MD. Dr. Krause was a lifelong Faculty member and served as Chairman of the Library Committee from 1952 to 1963.

The expansion has allowed the library to display many of its treasured artifacts. The Krause room has on display the entire collection of one of the society's founders, Dr. Upton Scott. Along with his books there is a display of his eighteenth century medicine chest. Also on permanent display are the camp medicine chest of Napoleon Bonaparte and the Waldan's Phantom Face (used by nineteenth century ophthalmology students).

The library has been able to recreate three of its award winning exhibits. Currently on display in Osler Hall are "Contributions to Medicine by Selected Women Members of the Medical and Chirurgical Faculty" and "Celebrating Maryland's Black Medical Heritage." The dining room of the Faculty features a third exhibit, "Is There a Doctor in the House? Physicians in the State House, 1635 - 1986," which until recently was on display at the State House in Annapolis.

The blending of the old and the new: seeing the medicine chest of an eighteenth century physician or searching for medical literature on a compact disc. You will find it here at the Faculty's library.

*ADAM SZCZEPANIAK*
Library Director

## Auxiliary Membership

Membership in the Auxiliary offers many things to many people. It offers the opportunity to be involved with people who truly relate to the unique circumstances we all find ourselves in as part of a medical family. It provides an opportunity to enjoy the camaraderie of others in the same situation, and it is a group that prides itself in "taking care of its own." We are spouses of all ages and a variety of interests. We have many educational programs as well as programs "just for fun." Programs of special interest to the auxiliary concern AMA/ERF, community health and welfare, improving the image of the physician, and working to influence the legislative process.

While we would like to encourage active participation by all medical spouses we understand that circumstances and the demands on one's schedule limit available time. Even if a spouse does not have time to be actively involved, membership in the Auxiliary still should be considered. It not only shows support of the medical family but also aids us in our attempts to influence the legislative process. Numbers count! A politician will be far more receptive in listening to the concerns of a larger group rather than a smaller one.

In today's climate of legislative reforms and attempts to alter the way medicine is practiced, it is more important than ever that we, as a knowledgeable group of individuals who truly understands the potential end result of many of these reforms, do what we can to protect the quality and availability of medicine as we have known it. In addition to these legislative concerns, we have been and would like to continue to be a strong force in such legislative matters as seatbelt regulations.

For these reasons it is important to have a membership strong in numbers. Therefore, we ask you to encourage all medical spouses to join their auxiliaries. We hope that many will be able to enjoy our various programs and functions, but we welcome and encourage all medical spouses to join and to show their support of the medical community. We are proud to note that the following Legislative Report is by the first male spouse member of Med Chi's Auxiliary.

*VICTORIA CAMERON*
Membership Chairman

## Legislative Report

The characteristics of the current political environment are determined by changes in public attitudes, the nature of the issues facing medicine, and the changes that have occurred in the process itself. These radical changes have had a direct impact on organized medicine's ability to have its voice heard in the legislative process, making an organized and effective grassroots lobbying program a necessity. The Med Chi Auxiliary's participation in this program represents an outstanding opportunity to realize our potential: the ability to affect over 400 pieces of health-related legislation introduced at the state level each year; the capacity to help shape the mass of federal regulations imposed on the medical community; the opportunity to increase our participation and value within our own medical societies, both state and local; and the potential to promote and enhance the image of the medical community.

In an effort to capitalize on this potential, the Auxiliary Legislative Committee was formed. After our intial meeting, several primary projects were targeted.

- The Phone Bank and Legislative Alert System will be expanded to cover the entire state under the direction of a state coordinator. Activation of this system during times of impending legislative action will enable us to insure a more effective and cohesive lobbying effort.
- Educational workshops and programs have been planned to increase involvement and effectiveness of County Legislative Committee chairmen.
- Last year's successful "Day in Annapolis" will be repeated this year providing an opportunity to lobby our legislators and to observe committee hearings. With the help of Gerry Evans, Med Chi's Director of Government Relations, we also have planned to support one piece of legislation and follow it through the entire porcess.

Added emphasis will be placed on participation and membership in Med Chi's Legislative Committee and Maryland Medical Political Action Committee (MMPAC). Formal participation on county societies' legislative committees is also a stated goal of our Long-Range Planning Committee.

Med Chi's Legislative Committee meetings are open to any interested Auxilian. Dates and minutes of these meetings will be provided to all county chairmen, and their attendance will be encouraged.

Membership in MMPAC is an important way to get involved in the political process and to show our support of Med Chi's "political arm." Joining MMPAC helps insure that candidates supported by Med Chi are elected to office.

Realizing our potential as a group will depend entirely on maximizing our participation as individuals. The state committee and county legislative chairmen need and seek your involvement. Your willingness to actively participate will insure the success of our endeavors.

*DAN DIVITO*
Legislative Chairman
Washington County

Area meetings and course announcements
are listed each month under
*Doctors Take Note*

*Auxilary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Eva Edmonds President; Mrs. Betty J. Molz Editor.*

## Management of Uncommon Malignancies of the Breast (Part I)

It is estimated that 90 percent of infiltrating breast cancers present as ductal type, while medullary, tubular, lobular, and other cell types constitute less than 10 percent. The majority of the invasive carcinomas tend to be pleomorphic histologically and have a high potential for spread. On the other hand, noninvasive carcinoma have high curability rates. However, once carcinomas of the breast, regardless of their cell type, become invasive, they all behave in a similar fashion with a high propensity for metastases. An exception to this rule is the infiltrating tubular carcinoma that has no tendency for metastases, but its presence signifies that a more aggressive tumor, such as infiltrating ductal carcinoma, may follow. Some types of infiltrating carcinoma have been claimed to have better prognosis, such as medullary and mucinous (colloidal) carcinoma, as they tend to metastasize but late.

Other types of breast tumors include noninvasive, minimal invasive, inflammatory, local-regional advanced carcinomas (that is, Stage III), metastatic adenocarcinoma in the axilla of unknown primary, and squamous cell carcinomas. Other malignancies reported in the breast include melanoma, adenoid cystic carcinoma, and a variety of sarcomas.

### Noninvasive Breast Cancer

There are two types of noninvasive breast cancers: intraductal (including papillary type) also known as in situ ductal and the in situ lobular. These constitute an overall incidence of 1.4 percent of all breast cancer. While both of in situ carcinomas constitute 3.2 percent of all ductal and lobular cancers, in situ lobular frequently is found among patients with a history of lobular carcinoma (in the other breast) with an incidence of 18.5 percent. Such incidence could be as high as 30 percent to 100 percent. On the other hand, in situ ductal is detected in only 2.1 percent of patients with a history of infiltrating ductal carcinoma. The incidence of in situ ductal to in situ lobular carcinomas is 10:6, and such incidence increases to 100:6 respectively in the invasive stages.

It is estimated that 20 percent to 25 percent of the in situ lesions present as probable breast masses clinically. The majority of intraductal carcinomas are detected as microcalcifications on mammography. The incidence of this condition is rising, probably due to better mammographic equipment. However, in situ lobular carcinomas usually present as clinically palpable masses. In one of our studies, mammography detected only one out of 15 consecutive cases of in situ lobular carcinomas, where they all presented as palpable small breast masses. Furthermore, it seems that the size of the mass, of either in situ ductal or in situ lobular, does not affect the survival. There is a high incidence of noninvasive carcinomas between the ages of 45 to 54; with in situ lobular having a tendency to present in younger age groups, while in situ ductal carcinoma has no age preferential. In situ carcinomas are more common in whites than blacks with an incidence of 12:1, which is similar to infiltrating carcinoma. The most common site for noninvasive carcinomas are the upper outer quadrants followed by the lower outer quadrants.

Among the pathological characteristics of these tumors is that frozen sections are very unreliable, especially with in situ lobular carcinomas. Furthermore, it should be noted that the microcalcifications seen with the intraductal carcinomas are not present in the tumor but are in the area of the breast near the tumor.

The reported surgical management of these lesions included local excision, wedge resection, total mastectomy (simple mastectomy), modified radical mastectomy, radical mastectomy, and extended radical mastectomy. Each approach gave its own reasoning as seen in the table below.

From these data, total mastectomy and low axillary dissection became the standard treatment for noninvasive breast carcinomas. However, the demonstration that segmental mastectomy and axillary dissection in the management of the infiltrating carcinomas produced results compatible to modified radical mastectomy made the evaluation of conservative treatment in these lesions a compelling issue. Therefore, the National Surgical Adjuvant Breast Project (NSABP) has initiated a prospective controlled study (Protocol B-17) to evaluate lumpectomy (partial mastectomy, also known as tylectomy or wedge resection) and axillary dissection, with and without breast irradiation in the management of noninvasive intraductal carcinoma. In the first 350 patients studied, none of the axillary lymph nodes was found to contain metastasis. Therefore, axillary dissection has been discontinued. However, the role of irradiation continues to be investigated. Patients with intraductal carcinoma are managed according to

| - | In situ Ductal (percent) | In situ Lobular (percent) |
|---|---|---|
| 1.Multicentricity | 0 - 33 | 25 - 100 |
| 2.Occult invasion @ diagnosis* | 6 | 6 |
| 3.Subsequent invasive cancer | 28 | 4 |
| 4.Status of lymph nodes @ diagnosis | 0 - 3.8 | 0 |
| 5.Survival data @ 5 years | 64 - 91 | 83 - 88 |

*Electron microscopic studies indicate that invasion is present in most of the cases presumed to be noninvasive by light microscopy.

*If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13EO2, Baltimore, Maryland 21201 (301-328-5224).*

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NSABP by partial mastectomy (with pathologically negative resection margins), then the patients are randomized to receive or not receive radiation therapy to the ipsilateral breast.

Reference: Elias EG. Handbook of Surgical Oncology. Boca Raton, FL: CRC Press, 1988.

*Tumor conferences are held weekly on Tuesday between 8-9 am in Room N13E28 at the University of Maryland Medical System. This is an open meeting, and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.*

*E. GEORGE ELIAS* MD
Professor of Surgery and Oncology
Director, The Surgical Oncology Program
University of Maryland Medical System

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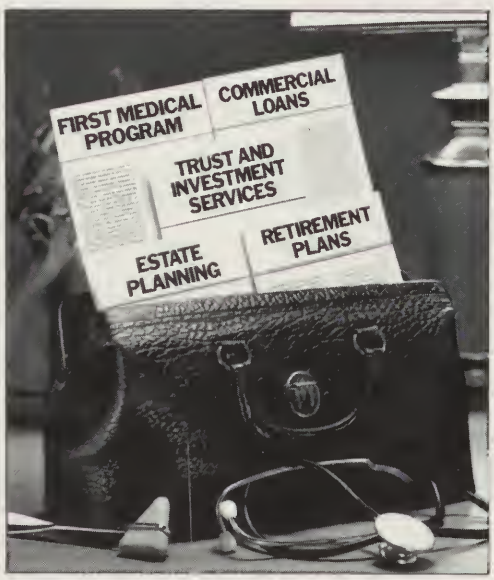
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# YOUR RESPONSE IS NEEDED!

The sponsoring organizations listed below recently mailed a survey to hundreds of Maryland physicians. The survey is intended to determine their interests, concerns and experiences with computers in medicine.

We are asking survey recipients to please complete and return the questionnaire at their earliest convenience. A timely response will aid us in our research.

Our Sincere Thanks To Those Surveyed

CENTER FOR HEALTH EDUCATION, INC.
MED-CHI COMPUTERS IN MEDICINE COMMITTEE
UNIVERSITY OF MARYLAND DEPARTMENT OF FAMILY MEDICINE
LIFECARD INTERNATIONAL, INC.

For additional information call Carmine Valente, Ph.D., Center for Health Education, Inc. 301-837-2705.

# Executive Director's Newsletter

DECEMBER 1988

**AMA STATEMENT ON RBRVS**

On September 28, 1988 James S. Todd MD, the AMA's Senior Deputy Executive Vice President, issued a statement concerning the AMA's position on the Harvard RBRVS report. In brief, the AMA is pleased that HCFA has undertaken to study the current system of reimbursing physicians for services to Medicare patients and to devise a more equitable system based on an appropriate relative value scale. However, Dr. Todd also stated that the, "AMA has not and will not endorse the study until we have sufficiently analyzed its results and consulted with the national specialty and state medical societies."

The AMA is scheduled to meet with the national specialty, state and county medical societies and then report its findings and recommendations to the AMA House of Delegates at their Interim Meeting in early December.

**SPECIALIST IDENTIFIER**

Physicians are reminded that they <u>may</u> <u>not</u> represent to the public, including in advertisements and the yellow pages, that they are a specialist in any field of medical practice unless identified as such by the Board of Physician Quality Assurance.

Application for specialty designation is open to all licensed physicians in Maryland. If a physician is certified by the American Board of Medical Specialists, the identification is automatically given by the Board upon confirmation of that credential. If not certified by the American Board of Medical Specialists, the physician must complete an application outlining specific training and experience in the requested specialty. Applications are referred to the Med-Chi Committee on Specialist Identification for evaluation and recommendation to the Board. The criteria used for such evaluations were developed jointly by Med-Chi and the Board and are set forth in administrative regulations having the force and effect of law. Applications may be obtained from the Board of Physician Quality Assurance by calling (301) 225-5900.

ANNUAL MEETING

The 191st Annual Meeting of the Medical and Chirurgical Faculty will be held at the Turf Valley Hotel and Country Club, Ellicott City, Wednesday, April 12 through Friday, April 14, 1989.

ERRATA

In the August 1988 issue of the Maryland Medical Journal, page 654 under "Nominations," the slates of the Delegates to the AMA were listed incorrectly. Effective January 1, 1989 list of Delegates will be:

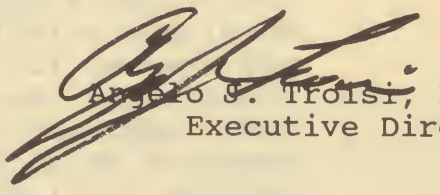
| Delegates | Alternate Delegates |
|---|---|
| Albert Antlitz MD | Alex Azar MD |
| Michael Dobridge MD | Joseph Snyder MD |
| John Hebb MD | Philip Schneider MD |
| Donald Lewers MD | William Venanzi |
| George Malouf MD | Henry Wagner MD |
| Roland Smoot MD | Vacancy |

PPRC PHYSICIAN SURVEY

Maryland physicians may be selected from the AMA's Physician Masterfile to participate any of the three PPRC physician surveys. The first survey, scheduled to begin in mid-November will provide data needed on practice styles, costs and billing policies. A second survey will ask 3,000 Medicare beneficiaries how physician and Medicare billings have impacted them. A third 1989 survey will ask physicians in three specialties to log the time they devote to evaluation and management services. Med-Chi encourages physicians to respond if asked to participate in one of these surveys.

WORKMEN'S COMPENSATION

The Maryland Workmen's Compensation Commission is required by law to review the allowable fees and other charges for completeness and reasonableness and to make appropriate revisions to establish guidelines to the Medical Fee Guide. The Medical Advisory Committee invites all medical providers to submit their recommendations to A. Paul Kaye, Chairman, Medical Advisory Committee, 7400 York Road, Towson, MD 21204.



Angelo S. Troisi, FACHE
Executive Director

# Quality Practice Digest

## LEGAL AND ETHICAL CONCERNS OF YOUR MEDICAL PRACTICE

This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the state.

The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIV, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.

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## DISSOLUTION OF MEDICAL PRACTICE

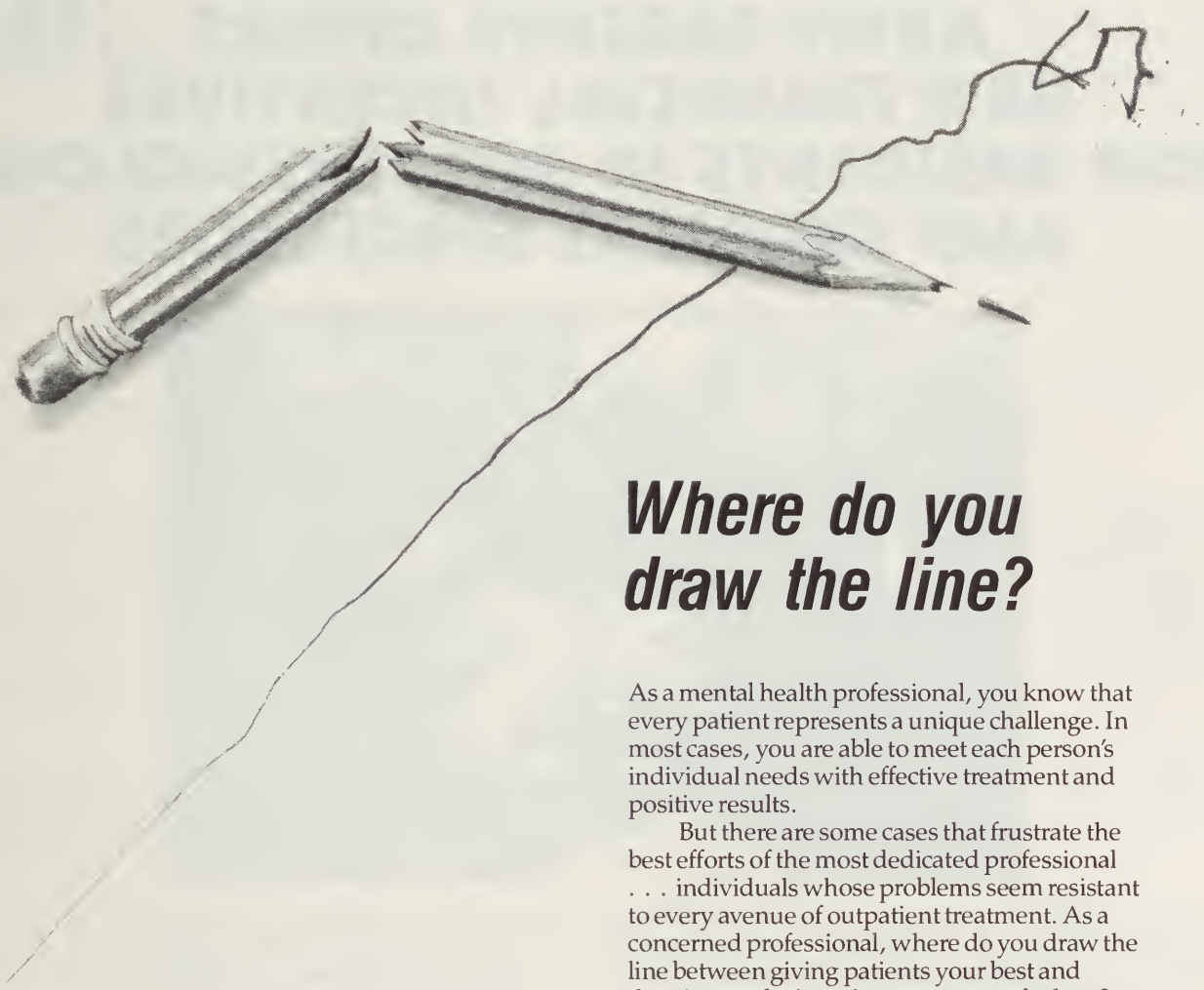
The following ethical statement adopted by the Faculty addresses the concerns of physicians involved in a "medical divorce" which occurs when a practice is dissolved or a physician leaves or is discharged from a practice:

> When physicians dissolve a professional corporation or partnership, or when a physician group discharges a physician employee, the patient's best interest must be paramount, regardless of the dispute that may arise in such situations.
>
> The notice of the change in providers should be a simple factual statement, provided to patients in a timely manner. It should indicate the date of the dissolution or discharge, the address and telephone number of the physician(s) who will be available for continued patient care. If the departing physician(s) is(are) continuing practice, the address and telephone number of the departing physician(s), when known, should be made available to patients for continued care.
>
> Appropriate instructions should be given to the office staff concerning the handling of patients' questions. Disputes concerning medical records should be resolved according to Ethical Opinion 104, Medical Records*. All physicians involved should act in a fair and professional manner. The patient must always have free choice of physicians unless the patient has limited this right by contract with an alterative delivery system.

*Ethical Opinion 104. MEDICAL RECORDS

.01 Ownership The physician who creates the patient's medical records is the owner of those records. The medical record includes x-rays and living wills. If the physician is associated with some type of a legal or corporate entity, the records may be the property of that entity, depending upon the terms of the relationship. If a written agreement concerning the custody and ownership of the medical records exists, such an agreement prevails. It is in the physician's best interests to enter into such an agreement.

02. Transfer between Physicians The patient's interests are paramount when dealing with a request for transfer of medical records. Physicians who are in possession of a patient's medical records should not refuse, for any reason, to make copies of those records promptly available to the current treating physician upon the receipt of the patient's proper written request. If the patient's medical record includes a living will, it should be transferred as well, unless the patient specifically states otherwise. Copies of pertinent medical records or an abstract thereof should not be withheld pending payment of a patient's outstanding account. If additional information is required, the physician should respond courteously and promptly. If the copying or abstraction is unduly burdensome or lengthy, a reasonable fee may be charged. Such a fee should be agreed upon at the outset. A physician who is planning to retire should, likewise, send medical records to physicians free of charge; medical records of former patients should not be sold. When transferring x-rays to the current treating physician, the physician in possession of the x-ray may charge the reasonable cost of copying and postage. Under no circumstances may a deposit (refundable or non-refundable) be charged for lending the x-ray to the current treating physician.



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**J. Mehsen Joseph, Ph.D., Director,**
Community Health Surveillance Administration

**Ebenezer Israel, M.D., M.P.H., Director,**
Epidemiology and Disease Control Program

**EPIDEMIOLOGY AND DISEASE CONTROL NEWSLETTER**
COMMUNITY HEALTH SURVEILLANCE ADMINISTRATION
Maryland State Department of Health and Mental Hygiene

**201 W. Preston Street/Baltimore, Maryland 21201/(301) 225-6700**

**DECEMBER 1988**

## RECOMMENDATIONS FOR DIAGNOSING AND TREATING SYPHILIS IN HIV-INFECTED PATIENTS

Maryland has experienced a dramatic increase in the reports of primary and secondary (P&S) syphilis over the past two years. During the first six months of calendar year 1988, Maryland received 358 reports of P&S syphilis, a 75% increase over the same period in 1987. In 1987, Maryland experienced a 32% increase in P&S syphilis over 1986. The greatest increase has been reported in black women of child-bearing age.

Public health officials continue their rigorous efforts in the control of P&S syphilis. Private practitioners are key players in this control effort and may assist in the disease intervention process by:

1. Having a high index of suspicion for primary syphilis when examining a young sexually active person with ulcerative lesions at the site of sexual exposure, or for secondary syphilis in one with any rash illness;

2. Utilizing available diagnostic tests, such as serologic tests for syphilis (STS) and darkfield microscopy;

3. Treating patients with syphilis and their sex partners, according to current CDC guidelines; and,

4. Reporting syphilis cases immediately to local Health Departments who will be able to assist in case management and rapid sex partner notification.

The clinical manifestations, serologic responses, efficacy of treatment, and occurrence of complications of syphilis may be altered in patients coinfected with human immunodeficiency virus (HIV). Because syphilis is a disease with a broad range of manifestations and variable course, assessing reports of unusual cinical or laboratory findings in HIV-coinfected patients is difficult. On March 21 and 22, 1988, experts from academic medical centers and state and local health departments met at CDC to discuss the diagnosis and treatment of syphilis in HIV-infected patients. The following recommendations were developed based on these discussions.

**Diagnosis of Syphilis in HIV-Infected Patients:**

Most HIV-infected patients appear to have a normal serologic response to Treponema pallidum infection. However, in some HIV-infected patients with biopsy-confirmed secondary syphilis, both nontreponemal and treponemal tests for syphilis are negative. In addition, some patients infected with both T. pallidum and HIV have had unusually high titers on nontreponemal serologic tests for syphilis (CDC, unpublished data, 1987-88), possibly because of HIV-related polyclonal B-cell stimulation. The frequency of unusual clinical and laboratory manifestations of syphilis in patients coinfected with HIV is unknown.

**Recommendations:**

1. Persons with HIV infection acquired through sexual contact or intravenous (IV) drug abuse should be tested for syphilis, and all sexually active persons with syphilis should be tested for HIV (with the informed consent of the patient). HIV test results are clinically important in managing patients with syphilis and, with appropriate confidentiality safeguards, should be made available to medical personnel who care for these patients.

2. When clinical findings suggest syphilis is present, but serologic tests are negative, other tests should be used to determine if syphilis is present. These tests include dark-field microscopy and direct fluorescent antibody for T. pallidum (DFA-TP) staining of lesion exudate and examination of biopsy tissue using DFA-TP or Steiner stain. (In evaluating biopsy specimens, histologic stains (Warthin Starry Silver, Steiner) must be interpreted with caution since other spirochetes and artifacts may be misidentified as T. pallidum with these silver stains.)

3. Laboratories should titrate nontreponemal tests to a final endpoint, rather than reporting results as greater than an arbitrary cutoff (e.g.,>1:512). Specific results permit more accurate determination of response to therapy and also help identify unusual serologic responses to syphilis.

4. Neurosyphilis should be considered in the differential diagnosis of neurologic disease in HIV-infected persons.

5. Consultation should be obtained to evaluate unusual serologic test results in patients suspected of having syphilis or in those being followed for response to treatment.

**Treatment and Follow-Up:**

Case reports have suggested that treatment failures, including progression to neurosyphilis, may occur more frequently

in patients coinfected with HIV than in those with syphilis alone. This has not yet been confirmed, because an intact cellular immune response is important in the host response to T. pallidum infection and because HIV infection impairs cellular immune response in some patients, an increased frequency of treatment failure is plausible.

Recommended treatment schedules for neurosyphilis have included benzathine penicillin, although treatment with benzathine penicillin in currently recommended dosages does not achieve treponemicidal antibiotic levels in the cerebrospinal fluid of most patients with syphilis, and rare treatment failures have been reported.

**Recommendations:**

1. No change in therapy for early syphilis for HIV-coinfected patients is recommended. However, there is disagreement on this issue, and some authorities have advised CSF examination and/or treatment with a regimen appropriate for neurosyphilis for all patients coinfected with syphilis and HIV, regardless of the clinical stage of syphilis. In all cases, careful follow-up is necessary to assure adequacy of treatment.

2. Serologic testing after treatment for early syphilis is important for all patients, regardless of HIV infection status. In patients coinfected with HIV, quantitative nontreponemal tests should be repeated at 1, 2, and 3 months and at 3-month intervals thereafter until a satisfactory serologic response to treatment occurs. If the titer does not decrease appropriately (two-dilution decrease by 3 months for primary syphilis or by 6 months for secondary syphilis or if a sustained two-dilution or greater increase occurs, the patient should be reevaluated to consider the possibility of treatment failure or reinfection, and CSF should be examined. Sexually transmitted disease (STD) clinics and others providing STD treatment should assure adequate follow-up.

3. A CSF examination should precede and guide treatment of HIV-infected patients with latent syphilis present for longer than 1 year or for unknown duration. If an examination is not possible, patients should be treated for presumed neurosyphilis.

4. Benzathine penicillin regimens should not be used to treat either asymptomatic or symptomatic neurosyphilis in HIV-infected patients. Patients should be treated for at least 10 days with either aqueous crystalline penicillin G, 2-4 million units IV every 4 hours (12-24 million units each day), or aqueous procaine penicillin G, 2.4 million units intramuscularly daily, plus probenecid 500 mg orally 4 times a daily.

Reported by: Div of Sexually Transmitted Diseases, Center for Prevention Svcs; AIDS Program and Sexually Transmitted Diseases Laboratory Program, Center for Infectious Diseases, CDC.

**EDITORIAL NOTE:** The expert consultants also highlighted the following research priorities related to the diagnosis and treatment of syphilis in HIV-coinfected patients:

1. The effect of HIV infection on initial clinical and laboratory manifestations of syphilis and on the efficacy of current syphilis therapy should be prospectively studied.

2. A surveillance system should be developed to detect complications of syphilis, especially neurosyphilis, and unusual clinical and laboratory manifestations of syphilis in patients with and without HIV-coinfection.

3. The importance of CNS involvement in early syphilis should be determined in patients with and without HIV coinfection.

4. Better laboratory methods should be developed for detecting T. pallidum or T. pallidum antigens in CSF, blood, and lesions.

5. A better animal model of T. pallidum infection is needed to examine the effect of immunosuppression on the course of syphilis.

So that the frequency of unusual manifestations of syphilis can be determined, health-care providers are requested to notify their state epidemiologist of HIV-infected patients who meet one of the following conditions:

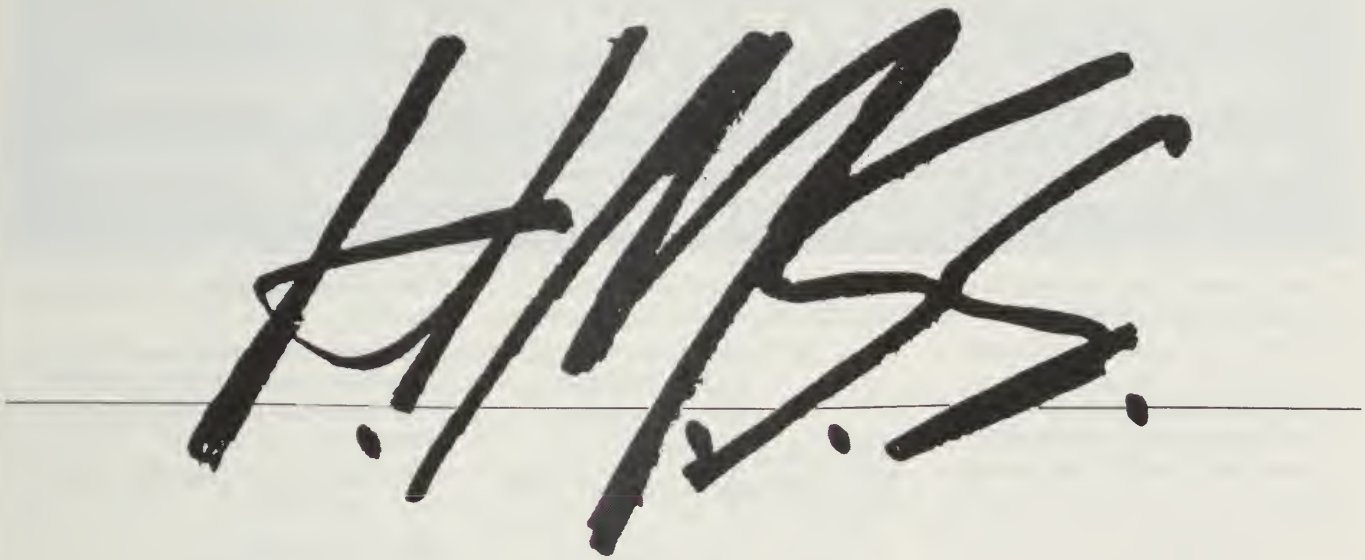
1. Neurosyphilis confirmed by CSF examination or histopathology;

2. Negative serologic tests for syphilis (nontreponemal (VDRL, RPR) or treponemal {FTA-ABS, MHA-TP, HATTS} tests) during secondary syphilis diagnosed by dark-field microscopy or histopathology of lesions material.

The state epidemiologists will forward these reports without personal identifiers to the Division of Sexually Transmitted Diseases, Center for Prevention Services, CDC.

References are available upon request.

Adapted from the MMWR, CDC, October 7,1988/Vol. 37/No. 39.



# The AMA Hospital Medical Staff Section Twelfth Assembly

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## The Wind Spirit • Italy/Adriatic Air/Sea Cruise

Departing: July 1989

An exciting, new thirteen-day combination of the sailing yacht *Wind Spirit* and the best of Italy. **Florence** and **Venice**, Italy. Cruise aboard the *Wind Spirit* among the islands of the Dalmatian Coast: **Losinj, Split, Hvar, Korcula, Kotor Fjord/Sveti Stefan** and **Dubrovnik**, Yugoslavia.

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## Canadian Rockies Adventure

Departing: August 1989

This ten-day nature spectacular includes **Edmonton, Jasper Park**, a visit to **Lake Louise, Banff, Victoria** and **Vancouver**.

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## Orient-Express

Departing: August 1989

The nostalgic and romantic ***Venice Simplon Orient-Express*** is the magnificent centerpiece of this exclusive thirteen-day holiday to the best of Europe. **Munich**, West Germany. **Vienna**, Austria. Overnight on the ***Venice Simplon Orient-Express*** from Vienna to **Paris**, France.

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Departing: October 1989

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Or call, 301-539-0872

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# One Minute with Diabetes

## Dupuytren's Contracture

*Doctor, I have felt some nodules in the palms of both my hands for some time. Recently I have not been able to fully extend my fourth and fifth fingers on both hands. Is this condition related to my diabetes?*

The problem with your hands is called Dupuytren's contracture. It is characterized by nodular or plaquelike thickening of the palmar fascia overlying the tendons of the fingers. The skin overlying the contracture becomes puckered. The condition is often bilateral, and the etiology is unknown. The incidence of Dupuytren's contacture in diabetic patients is three times greater than in nondiabetic individuals. This phenomenon occurs predominantly in males. Most cases require no therapy, but advanced forms may justify fasciectomy.

If patients having palmar contractures are examined thoroughly, fibrotic changes in the corpora cavernosa of the penis producing a fibrous chordee often are found (Peyronie's disease). Again the etiology is unknown, and it also is seen more commonly in diabetic patients than in nondiabetic persons. It has been suggested that both problems might have the same idiopathic etiology.

*DeWITT E. DeLAWTER MD*
Editor


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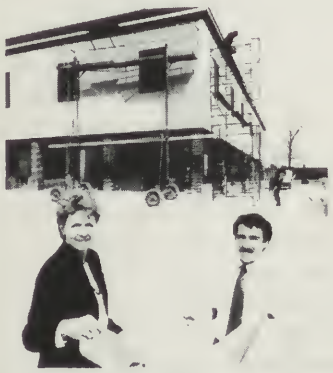
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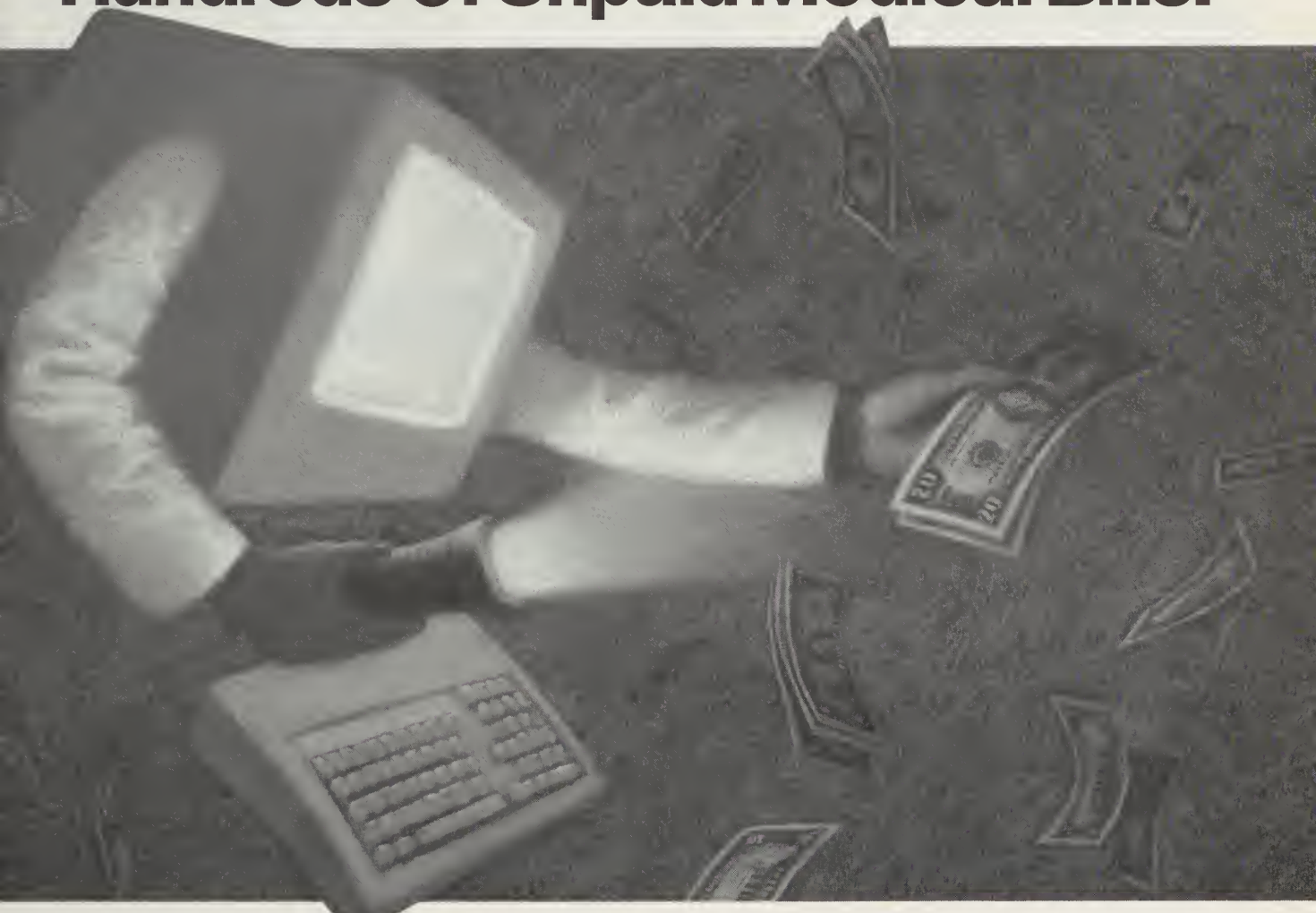
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# Information for Authors

*Med-Chi members reading papers before organizations, are invited to submit their papers to the MMJ for consideration for publications.*

The *Maryland Medical Journal* is the monthly publication of the Medical and Chirurgical Faculty of the State of Maryland. Its goals are educational and informative: the publishing of scientific articles and other technical information as well as editorials, special articles (evaluations, position papers, reviews of nonscientific subjects), membership news, notices of medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Faculty.

Manuscripts may be sent to Editor, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by the editor, editorial board members, and guest reviewers. The final decision is reserved for the Editor.

### Specifications

Manuscripts must be original typed copy, double spaced throughout (including text, case reports, legends, tables, and references) with margins of at least one inch. Number pages consecutively. Please submit two additional copies.

Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100-150 words is required.

Tables are to be typed on separate sheets of paper numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the revicwing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to Index Medicus, volume number, first and last page numbers, and year of publication. For more extensive information about preparing medical articles for publication, the editors suggest the International Committee on Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Illustrations are material that cannot be set in type. Photographic material must be submitted as high-contrast, glossy prints. Drawings and graphs must be done professionally in india ink on high-grade white drawing paper. *Omit illustrations that do not increase understanding of text, and limit them to a reasonable number.* Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Legends are to be typed on a separate sheet of paper. Type on a gummed label and affix to the back of each illustration: figure number, title of manuscript, name of senior author, and arrow indicating top. Legends for illustrations should be typed on a separate page with numbers corresponding to those on the photographs and drawings. Cost of printing color photographs must be borne by the author.

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### Editorial Responsibility

Manuscripts are subject to editorial modification and such revisions necessary to bring them into conformity with *Journal* style.

Galley proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

Statements made or opinions expressed by any contributor is any article or feature published in the *Journal* are the sole responsibility of the author.

## Maryland Medical Journal Tentative Editorial Calendar - 1989

This is a tentative general listing of topics for 1989. Readers and authors are invited to contribute their articles, comments, and letters to the editor for any issue. All manuscripts are reviewed by the Editorial Board and accepted or rejected on their merits. Publication lead time is approximately three months; for example, for the February issue, copy should be submitted by November 1.

Theme issues will include other unrelated articles; authors are encouraged to submit articles/comments/letters for any theme issue. Dedicated issues will deal with only one topic. MMJ will consider suggestions from readers for issues still open.

| | |
|---|---|
| *January* | Legislative Update (theme issue) |
| *February* | Health Promotion and Disease Prevention in the Care of Older Adults (dedicated issue) |
| *March* | open |
| *April* | History of Bacteriology (to 1925) and Medical Microbiology (since 1925) in Maryland (theme issue) |
| *May* | open |
| *June* | International Health Activities in Maryland Institutions (dedicated issue) |
| *July* | open |
| *August* | Annual Reports (dedicated issue) |
| *September* | open |
| *October* | Genetics (dedicated issue) |
| *November* | open |
| *December* | Semiannual Meeting and Reports (theme issue) |

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For respiratory tract infections due to susceptible strains of indicated organisms.

**Summary.**
**Consult the package literature for prescribing information.**

**Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
**Contraindication:** Known allergy to cephalosporins.
**Warnings:** CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

**Precautions:**
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

**Adverse Reactions:** (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

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# Doctors take Note

### University of Maryland School of Medicine

**CME Courses:** For each course additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956).

**Dec 1-3 Eleventh National Trauma Symposium**, Baltimore Convention Center. Info: K. Unitas, MIEMSS 301-328-2399.

**Dec 9 Diagnosis and Management of Osteoporosis**, Marriott BWI Airport, Baltimore. Fee: $35; 4 AMA Cat I credits.

**Dec 14 Dean's Conference #4: Anesthesiology**, UMAB. Fee: $25; 6 AMA Cat I credits.

**Jan 19-20 Behavioral and Developmental Problems in the School-Age Child**, Fee: $150; 11 AMA Cat I credits.

**Jan 25 Dean's Conference #5: Psychiatry**, UMAB. Fee: $25; 6 AMA Cat I credits.

**Feb 5-6 Cardiology at Wisp**, Wisp Ski Resort, Deep Creek Lake, MD. **POSTPONED**

**Feb 23 Dean's Conference #6**: TBA, UMAB. Fee: $25.

**Mar 3-4 Third Symposium on Urologic Cancer and Surgery**, Omni International Hotel, Baltimore. Fee: $175; 10 AMA Cat I credits.

**Mar 23 Dean's Conference #7: Preventive and Family Medicine**, UMAB. Fee: $25; 5.5 AMA Cat I credits.

**Apr 26 Dean's Conference #8: Topics in Surgery**, UMAB. Fee: $25; 5.5 AMA Cat I credits.

**Visiting Professor Program** - Directory of speakers and topics available for area hospitals and other health care organizations. No administrative fee. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentation hosted by the University's clinical departments. Hour-for-hour AMA Cat I credits available. Brochure available.

**Advanced Trauma Life Support Provider/Instructor Programs** sponsored by University of Maryland/MIEMSS. Fee: $350-500; 16-22 CME Cat I credits. Info: Melody Nelson 301-328-2919.

**Dec 15-16 - Provider**

• • • • •

### Miscellaneous Meetings

**Dec 2-3 Advances and Controversies in the Treatment of Health Professionals**, sponsored by the Medical Society of Virginia Physicians' Health and Effectiveness Program, Williamsburg Hilton and National Conference Center. Info: J. Douglas 804-353-2721.

**Jan 21 Tenth Anniversary Conference: Daycare in the 90s: A Controversial Reality,** sponsored by the Maryland Interdisciplinary Council for Children and Adolescents, held in the Ford Bldg of the Sheppard & Enoch Pratt Hospital from 9 a.m. to 12:30 p.m. (snow date is January 28). Registration requests: Dr. O.M. Taube, Program Chairperson, Greenspring Pediatric Associates, Sinai Hospital of Baltimore, 5105 Lanier Ave., Baltimore, MD 21215 (301-578-5800).

**Feb 3-5 Advanced Trauma Life Support Instructor Course**, Washington, DC. American College of Surgeons DC Committee on Trauma. Fee: $600; 26 Cat I credits. Info: D. Soto 202-784-2074.

**Mar 6-8 NIH Consensus Development Conference: Therapeutic Endoscopy and Bleeding Ulcers**, Warren Grant Magnuson Clinical Center, NIH, Bethesda. CME credit offered. Info: Endoscopy, Office of Medical Applications of Research, NIH, Bldg 1, Rm 216, 9000 Rockville Pike, Bethesdsa, MD 20892.

**Apr 12-16 Third Annual Course in Critical Care Medicine**, Center for Bio-Medical Communication in cooperation with Dept of Critical Care Medicine NIH, to be held at Crowne Plaza Hotel in Rockville, MD. Fee: $595 before Feb 1, $695 thereafter; reduced rates available to physicians-in-training and allied professionals. Info: S. Lisanti, Center for Bio-Medical Communication, 491 Grand Ave, Englewood, NJ 07631 (201-385-1808).

• • • • •

### The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. Sponsored Continued Education Activities for 1988-1989. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Dec 1-2 PHS Policy on the Humane Care and Use of Laboratory Animals**, Stouffer Harborplace Hotel, cosponsored with NIH. 11.5 Cat I AMA credits. Info: J. Ryan 301-955-2959.

**Dec 5-7 Interventional Neuroradiology: Current Practices and Techniques**. Fee: $550 physicians, $350 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-2959.

**Dec 8-10 First Annual Wilmer Institute Current Concepts in Ophthalmology**. Fee: $250, $200 (those in training); AMA Cat I credits. Info: D. Heydinger 301-955-2959.

**Mar 6-8; Jun 19-21 An Advanced Pediatric Life Support Course.** Fee: $445; 20 AMA Cat I credits. Enrollment will be limited. Info: C. Goodell 301-955-2959.

**Apr 4-5 In Vitro Toxicology - New Directions.** Fee: $250 before Mar 3, $300 thereafter; 14 AMA Cat I credits or 1.4 CEU. Info: C. Kearney 301-955-2959.

**30th Annual Postgraduate Institute for Pathologists in Clinical Cytopathology,** solely for Board Certified (or qualified) pathologists as a subspecialty residency. 152 AMA Cat I credits in two courses, **both of which must be taken.**

**Feb-Apr Home Study Course A** - personal reading and microscopic study at own lab in preparation for Course B.

**Apr 24-May 5 In-residence Course B,** lecture series, laboratory study, and clinical experience at The Johns Hopkins Medical Institutions, Baltimore.

Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb-Apr preceding Course B in Baltimore, Apr 25-May 5. Participants *outside* the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and preregistration advised ASAP: preregistration must be completed **before Mar 24, 1989,** unless by special arrangement. Info: J.K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205 USA.

**Ophthalmic Electrophysiology Technician Training Course** (on-going 1-week course by appointment). The Wilmer Eye Institute, Baltimore. Info: C. Kearney.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: C. Jarvic 301-955-8450.

**Advanced Practicum in Ultrasound** Dec 5-9. Fee: $460; 40 AMA Cat I credits.

**Visiting Physicians** - offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. Fee: $460; 40 AMA CAt I credits.

**Johns Hopkins Medical Grand Rounds** - Accredited audiovisual continuing education series of case discussion for clinicians; 30 topics/year in 5 bimonthly programs. Individual and group subscriptions; 40 AMA Cat I credits. Info: 301-955-3988.


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**CONTRAINDICATIONS**
There are no known contraindications to the use of sucralfate.

**PRECAUTIONS**
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

**Drug Interactions:** Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

**Pregnancy:** Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

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**Reference:**
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

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# Adolescence Today: Tough Times

Adolescence is considered to be a relatively healthy period during the life span of man. Mortality rates in the early teens are quite low, but from mid-teens on, there is an abrupt rise that continues into the twenties. Morbidity rates are more complicated to determine because they depend on how the term is defined during adolescence. If obesity, developing arteriosclerosis, and asthma are included in morbidity data, there is significant morbidity during the teens.

Although adolescence, when compared to adulthood, is relatively disease free (except for sexually transmitted disease), much of the current adolescent morbidity in the United States is related to or caused by risk-taking behavior. This is particularly true of unintentional injuries and the consequences of sexual behavior.

Experimental behavior (risk-taking behavior) characterizes adolescent development. Some scholars consider risk taking essential to the normal psychosocial development of the adolescent. Examples of the results of risk-taking behavior may be found in motor and recreational vehicle accidents, homicides, suicides, pregnancies, sexually transmitted diseases, eating disorders, and in alcohol and substance abuse. Transient experimentation with drugs, sex, diets, and new ideas is a normal activity with teenagers. However, excesses or complications of this behavior, such as pregnancy or compulsive drug use, are counterproductive to normal development, and this negative behavior may impact significantly adolescents' future development and career.

Because of space constraints, this issue of *MMJ* cannot address all aspects of adolescent morbidity and mortality. Therefore, we highlight topics of most common concern for those caring for teenagers. It should be apparent from the contents that the psychosocial and behavioral aspects of development during adolescent are important and overriding issues in adolescent morbidity and mortality. This emphasis has led to the old joke that describes a physician interested in adolescent medicine as a psychiatrist who performs pelvics. While this is true to some degree, adolescents' medical needs are much broader, and physicians must actively seek to provide care for them. Adolescents are still a vastly underserved group with great needs.

Providing care to teenagers can be very rewarding on both personal and public health levels. The real impact of preventing any single sexually transmitted disease, pregnancy, drug or alcohol abuse, unintentional automotive death, homicide, or suicide becomes most obvious by monitoring their incidences and prevalences in the population as a whole. A physically and emotionally healthy adolescent population certainly should be a primary objective for all who care for them. On the other hand, most clinicians who care for teenagers find the greatest professional reward in helping any single adolescent to grow and develop from a healthy child into a healthy adult. While the transition is sometimes rocky, the end result is wonderful.

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# Anorexia Nervosa: A Review

*JAMES C. HARRIS MD and ALAIN JOFFE MD*

**Anorexia nervosa is a relatively common problem affecting primarily white adolescent girls. It is manifested by deliberate, profound weight loss induced or maintained by patients who have unusual attitudes toward eating. The term is a misnomer because anorexia (loss of appetite) is rare until emaciation occurs. Despite advances in understanding anorexia and multidisciplinary treatments, this syndrome still is associated with significant long-term morbidity and mortality.**

Probably the earliest report of anorexia is from 1689 when Richard Morton provided this description:

> Mr. Dukes' daughter in S. Mary Axe, in the year 1684, in the 18th year of her age, in the month of July, fell ill in a total suppression of her monthly courses from a multitude of cares and passions of her mind. From which time her appetite began to abate, and her digestion to be bad; her flesh also became flaccid and loose and her looks pale without other symptoms of universal consumption. I do not remember that I did ever in all my practice see one, that was conversant with the living, so much wasted with the greatest degree of consumption, yet there was no fever but on the contrary a coldness of the body; no cough or difficulty breathing nor an appearance of any other distemper of the lungs, or any other entrail; no looseness nor other signs of colliquation. Only her appetite was diminished and her digestion uneasy with fainting fits which did frequently return upon her.

The English term for the illness is anorexia nervosa, and the German term is pubertatesmagersucht, which literally means "adolescent pursuit of thinness." It is this pursuit of thinness through dieting that distinguishes anorexia nervosa from other illnesses associated with weight loss. The term "anorexia" really is not correct, since loss of appetite rarely is seen until the patient becomes very emaciated. When continuous control over food intake is not possible, binge eating followed by vomiting may be used to lose weight. Laxatives and diuretics abused for similar reasons may lead to serious medical complications if serum potassium levels are lowered, placing the patient at risk for cardiac arrhythmia. Chronic hypokalemia may produce renal tubular damage, and persistent vomiting may lead to dental problems. The presentation commonly is related to weight loss, although symptoms of hypothermia, dependent edema, bradycardia, and hypotension are common (Table).

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An intense fear of gaining weight and becoming obese, a fear that persists even in the face of increasing cachexia, contributes to the characteristic disinterest and even resistance to treatment. Despite considerable weight loss, the patient describes a sensation of feeling fat after eating. Particularly in adolescents, there is a disturbance of body image and lack of awareness of the degree of thinness. The degree of body image distortion is related to the outcome; the greater the distortion in body image the more difficult it is to enlist the patient's cooperation in treatment. The initial referral in girls may be for amenorrhea, which may occur before the onset of a major loss in weight.

## Epidemiology

Anorexia nervosa is primarily a disorder of females. The ratio of males in an anorexic population varies from 4 percent to 6 percent. One severe case in every 200 school girls between the age of 12 and 18 in English boarding schools has been reported. Almost all cases occur in Caucasians although there are a few reported cases in blacks and Hispanics.

The onset of the disorder is ordinarily between ages 10 and 30 years, although younger patients have been reported. Eighty-five percent develop the illness between ages 13 and 20 years. Although rare in the retarded, there are occasional case reports. There is indirect evidence of an increase in prevalence of anorexia nervosa in the general population over the past few decades.

## Etiology

A variety of hypotheses have been invoked to explain the characteristic manifestations of anorexia. The syndrome probably has multifactorial origins with a reciprocal interplay between the forces outlined below.

A significant sociocultural trend that emphasizes thinness both as an idealized body type and as an example of self-control has accelerated in the last several decades. Directed most at those in the upper socioeconomic strata, it explains some of the characteristic demographics associated with this syndrome. In addition, adolescents (who are normally preoccupied with their changing bodies) are particularly vulnerable to stereotypes about the correct body shape.

Psychosocial factors center on the adolescent's normal developmental desire for independence within the context of a close-knit family that has trouble expressing emotion, denies family conflict, and is ambivalent about the separation of their daughter. The ability of the adolescent to separate from parents requires a sense of personal autonomy, something probably lacking in an adolescent who has grown up responding only to the needs and desires of others. Unable to express the desire for separation and ill-prepared to face the demands of the more complex social world of adolescence, the patient expresses self-control and achieves a sense of identity by control over appetite and body weight. Additional evidence for this factor stems from the significant degree of depression found in 30 to 60 percent of women with anorexia nervosa.

A biologic basis for illness is suggested by the increased rate of affective disorders detected in the first-degree relatives of patients with anorexia compared to families lacking a history of eating disorders. Conversely, relatives of patients with affective disorders do not have an increased risk for eating disorders. Furthermore, there is a high rate of concordance for anorexia in monozygotic as opposed to dyzogotic female twin pairs.

Other lines of evidence suggesting a biologic role include hormonal alterations not typically seen in starvation, abnormalities in cerebrospinal fluid neurotransmitters, and disturbances of sleep patterns detected during EEG recordings. Such evidence is often difficult to analyze in terms of whether the effects are primary or secondary to the illness. The validity of laboratory tests such as the dexamethasone suppression test and the thyrothropin-releasing hormone test is not yet established in anorexia. Animal studies involving control of appetite centers in the brain as well as set-point theories regarding body weight also point to a biologic component.

## Clinical Course

The presentation typically begins with concerns about mild obesity followed by negative attitudes toward eating. Despite weight loss, and in contrast to ordinary starvation, patients are usually alert and cheerful. In addition, they may be overactive and engage in strenuous exercise, often in a specific effort to lose weight.

From the beginning of the illness, certain behavior relating to food is seen, including gorging, induced vomiting, and secretly hoarding food around the home. Amenorrhea may begin before, with, or after the disturbance in appetite begins.

The course varies from spontaneous recovery without treatment, to recovery after a single episode following a variety of treatments, to a fluctuating course of weight gain with a series of relapses and, less commonly, a deteriorating course resulting in death due to complications of illness or starvation. The mortality rates at four-year follow-up have been reported in the range of 5 percent, however it is likely that mortality rates are decreasing with earlier diagnosis and referral.

The best indicator of good outcome is an early age of onset; poor prognostic factors are late age of onset and recurrent hospitalization. The primary impairments

**Table. Physical Finding and Laboratory Abnormalities in Patients with Anorexia Nervosa**

| | |
|---|---|
| **Physical** | |
| Vital signs | Bradycardia, hypothermia, hypotension |
| Skin | Lanugo hair; loss of subcutaneous fat; yellow, dry and/or desquamating skin; scalp and genital hair loss; increased hair color pigmentation |
| Extremities | Edema, cyanosis, mottling, cold temperature |
| Genital | Dry, thin vaginal mucosa; small cervix and uterus |
| Musculoskeletal | Weakness, loss of muscle mass |
| **Laboratory abnormalities** | |
| Neuroendocrine | Decreased FSH and LH with immature secretory pattern, increased growth hormone, T3 low, reverse" T3 elevated growth hormone may be elevated, erratic vasoporessin secretion, elevated serum cortisol, decreased estrogen and testosterone |
| Renal | Elevated BUN if dehydrated, decreased glomerular filtration rate |
| Hematologic | Leukopenia, thrombocytopenia, anemia late, decreased transferrin |
| Metabolic | Hypoglycemia; elevated cholesterol (early), decreased (late); hypercarotenemia; elevated sweat chloride |
| Electrocardiogram | Bradycardia, low voltage |
| Radiographie | Decreased cardiac silhouette, osteoporosis |

*If the patient also is vomiting or using laxatives or diuretics to maintain weight loss, physical findings and laboratory abnormalities seen in bulimia may also be present. These include:*

| | |
|---|---|
| **Physical** | |
| Oral | Parotid gland hypertrophy, dental caries, pyorrhea, dental enamel erosion |
| Skin | Ulcerations, callouses, scars on dorsum of hand |
| Neuromuscular | Muscle weakness, hyporeflexia, peripheral neuropathy |
| Cardiac | Arrythmias |
| GI | Abdominal distension, ileus, acute gastric dilatation, esophageal tears |
| Pulmonary | Pneumomediastinum |
| **Laboratory abnormalities** | |
| | Elevated serum bicarbonate (metabolic alkalosis secondary to vomiting) |
| | Hypokalemia, hpochloremia, hyponatremia |
| | Hyperamylasemia |
| | Metabolic acidosis (with laxative use) |
| | Hypo or hypercalcemia; hypomagnesemia |

are the need for hospitalization and the effects of the disorder on peer relationships.

Bulimia (excessive hunger) is present in about half of anorexia nervosa patients. It is differentiated diagnostically in that bulimic patients maintain their weight within a normal range despite large fluctuations of weight within that range. Currently, it is suggested that anorexic patients with bulimia are a subgroup among patients with this disorder. In this population, self-induced vomiting, laxative abuse, and diuretic abuse are more prevalent. Increased evidence of impulsive behavior, alcohol and street drug abuse, suicide, and stealing also might be present in bulimia.

**The DSM. IIIR diagnostic criteria are** (1) refusal to maintain body weight over a minimum normal rate for age and height, for example, weight loss leading to maintenance of body weight 15 percent below that expected or failure to make expected weight gain during a period of growth, leading to a body weight 15 percent below that expected for age; (2) intense fear of gaining weight or becoming fat, even though underweight; (3) disturbance in the way body weight, size, or shape is perceived, for example, the patient claims to feel fat even when emaciated and believes one area of the body is "too fat"; and (4) in females, the absence of at least three consecutive menstrual cycles, at times when they are expected to occur (primary or secondary amenorrhea).

### Differential Diagnosis

Careful attention to the DSM.IIIR criteria and a careful history and physical examination will exclude most other causes of weight loss. *Malignancy* should be accompanied by other symptoms or abnormal hematologic parameters. *Inflammatory bowel disease*, especially before the onset of classic gastrointestinal symptoms, may present with anorexia, amenorrhea, and weight loss. However, these patients will not have an altered body image and may well have an elevated erythrocyte sedimentation rate or stools positive for occult blood. Given that patients with anorexia can become hypothyroid, *hyperthyroidism* as the cause of weight loss should be differentiated easily. *Other metabolic diseases* can be excluded by measurement of serum electrolytes, renal and liver functions, and blood glucose. *Central nervous system pathology* is suggested by the presence of severe headaches, papilledema, or visual field changes.

Anorexia nervosa also must be differentiated from *depressive disorders*. Depressed teenagers do not become preoccupied with the caloric content of food, and they do not show food preoccupations, excessively collect recipes, or spend inordinate amounts of time preparing food. Depressed adolescents actually do have a decreased appetite. However, some adolescents may have both diagnoses.

In a *somatization disorder*, weight loss and vomiting can occur, but the weight loss tends not to be as severe, the patient is not preoccupied with losing weight, and amenorrhea is seldom a consistent finding. In *schizophrenia*, there may be delusions about food, but the focus is not on caloric content of food. Schizophrenic patients are not preoccupied with becoming obese and do not demonstrate the hyperactivity often seen in anorexia nervosa. Rarely do both of these diagnoses occur.

### Assessment

Interviews should be conducted with both the adolescent and family members since the anorexic patient may deny the characteristics of the disorder. In some instances, a diagnostic admission is necessary to make independent observations and clarify the diagnosis. Family history should be gathered regarding eating disorders and depression. Assessment includes how parents manage dieting and weight loss. The function of the symptom within family relationships is evaluated. Previous treatment must be considered, and a comprehensive physical examination must be conducted.

Psychological evaluation must be carried out to determine both educational ability and intelligence level, since many affected young persons are unrealistic in their own expectations of school performance and have been overachievers in the earlier years of school.

Mental status examination should specifically address the questions regarding diagnostic criteria for the disorder as well the patient's attitudes toward other family members, responses to siblings' and parents' behaviors and conflicts, social or sexual fears, and peer relationships. Specific questions about depressive symptoms and sleep disturbances need to be asked.

### Treatment

Rigorous long-term, double-blinded studies of carefully defined patient populations and treatments are scarce. Given the likely multifactorial etiology of the disorder, a multidisciplinary approach to treatment is prudent. These therapies involve attention to individual patient psychodynamics (insight-oriented therapy), family functioning (family therapy), eating behaviors and their meaning for the patient (behavior modification), and recognition and gradual reversal of biochemical, nutritional, and metabolic abnormalities (nutritional therapy).

*An important element of treatment is to reassure the patient that she will not gain an excessive amount of weight. This likely will mean a compromise between what the patient accepts and what the physician desires and will require careful nurturing of the trusting relationship that must exist between the clinician and patient.*

A critical aspect of therapy is the decision whether to manage the patient on an outpatient basis. Findings indicating need for hospitalization include evidence of hypovolemia (low systolic blood pressure), electrolyte imbalance (hypokalemia, hypomagnesemia, hypophosphatemia), hypothermia, uncompensated metabolic acidosis or alkalosis, weight loss to 30 to 40 percent below initial or normal levels, edema or congestive heart failure, suidical ideation or severe depression, psychosis, and/or an uncertain diagnosis. Those who fail outpatient management or whose families are unwilling or unable to participate in therapy also should be hospitalized.

Adolescents with this disorder tend to be unwilling or reluctant to accept treatment. Symptoms such as sleep disorder, depression, and the frustration about obsessive thoughts regarding food and body weight that interfere with ongoing life goals must be addressed. Additionally, reestablishing peer relationships might be an important issue. *Parent support for the treatment plan is essential.*

The first step is to restore nutritional status. With weight gain, changes in mood (particularly decreased irritability and depression), less preoccupation with food, and an improvement in the sleep difficulty usually occur. Restoring weight generally requires a structured environment, often in a hospital. Outpatient treatment can be considered in the following circumstances: early age of onset, symptoms present for less than four months, lack of vomiting or binge eating, and cooperative parents who can establish an appropriate structure at home and actively participate in family therapy.

Both outpatient and inpatient management are important to discuss with the family on initial visits since inpatient treatment may be needed. In regard to medical management, the more severely ill patients require daily monitoring of their weight, fluid intake, caloric intake, and fluid output. The vomiting patient needs frequent assessment for serum electrolytes. In some instances, food supplements might be required to provide adequate calories. Refeeding edema might occur if food intake is increased too rapidly. One approach is to provide a daily caloric intake to maintain admission weight plus an additional 50 percent for increased activity. Thereafter, caloric intake can be increased gradually to assure weight gain. Meals may be divided into six equal feedings to avoid ingestions of large amounts of food at one time. Ideally, the entire family will participate. In some cases, family therapy is indicated, and in other instances, separate parent-patient or sibling-patient sessions may be required.

A baseline observational period of several days in the hospital is helpful in developing a behavioral management program to complement the medical rehabilitation and nutritional approach. Positive reinforcement, making physical activity contingent on weight gain, and participation in hospital programming should be encouraged. Behavioral approaches also can be used to address vomiting by making the patient responsible for cleaning up following vomiting and using a commode in the room. Regular bathroom privileges can be resumed subsequently. Other contingencies include remaining with other patients for two hours after eating.

Individual treatment approaches initially are focused on the present rather than on past experiences. They should address the patient's awareness of her behavior, the effect it has on maintaining her illness, and specifically emphasize her responsibility for her own feelings and emotional states. Cognitive themes address fear of failure, anxieties about becoming independent from the family, and acknowledging age-appropriate responsibilities. Considerable time is needed to deal with the denial of the illness and to help the adolescent become aware of her need to control the environment through maladaptive behavior. In individual therapy, anxiety and preoccupation with weight will persist as weight is gained, requiring continued outpatient treatment. Outpatient management includes a behavioral contract, personal treatment for the patient, and family treatment. Weekly weights are recorded; if weight falls below the agreed on level, removal from sports and physical education activities at school may be necessary.

Recent evidence, based on small numbers of patients followed for relatively short periods of time, suggests that drug therapy might be useful in certain patients with anorexia. Use of drugs such as amitriptyline and cyproheptidine may improve some aspects of the disorder. Metoclopramide to facilitate gastric emptying can relieve some symptoms, but its efficacy when used on a long-term basis is unproved. Still uncertain is the relative contribution of each of these modalities to ultimate outcome.

## Prognosis

Despite advances in the understanding of anorexia, the emergence of a multidisciplinary treatment modality, and current research on optimum treatment strategies (including drug treatment), this syndrome is

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still associated with significant long-term morbidity and mortality. Mortality figures range from 2 to 5 percent to a high of 18 percent. Death may result from suicide, starvation, electrolyte imbalance, infection, gastrointestinal catastrophe, and cardiac insufficiency. Abuse of laxatives, diuretics, or other medications can also lead to fatal complications.

Statistics regarding long-term morbidity are more difficult to assess, since the degree of morbidity is influenced by the number and types of outcomes measured, for example, weight gain, social adjustment, employment, and persistence of abnormal eating behaviors. Two reviews-of-outcome studies suggest that one-third to one-half of patients recover completely and that at least one-third continue to have some difficulties with eating behaviors. Fifty percent or more of patients had difficulties in areas of social adjustment not related to eating or weight.

Factors predictive of treatment outcome remain elusive. Some suggest that early onset disease and short interval between diagnosis and treatment are favorable indicators, but not all authors concur. Those patients who have both anorexia and bulimia nervosa appear to do more poorly. Much more remains to be learned about predictors of ultimate prognosis.

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# Evaluating the Sexually Active Adolescent: Identification of Behavioral and Biologic Risk Factors

*CHRISTINA SEIFERT McLEAN MD and MYCHELLE FARMER MD*

**Sexual experimentation is very common during adolescence and often leads to sexually transmited diseases. Given the increasing numbers of adolescents with human immunodeficiency virus (HIV) infection, it is critical that physicians understand and address risk behaviors. Physicians need to be familiar with the behavioral and biologic factors that place adolescents at risk for sexually transmitted diseases (STD). Physicians also need to become competent in counseling adolescents about sexuality and HIV.**

Sexually transmitted diseases have long been a concern of physicians who care for adolescents. Many adolescents experiment with sexual relations,[1] despite multiple efforts to postpone sexual involvement.[2] By age 18, about 50 percent of adolescents in the United States have begun sexual intercourse.[3] The sequelae of early sexual experimentation are multiple and complex, but the most tangible of these include unwanted pregnancy and STD.

Adolescents engaging in sexual relations are at extremely high risk for contracting STD. Nationwide reports indicate that two-thirds of reported gonorrhea cases occur in populations under 25 years of age,[4] and chlamydial infections are far more prevalent in adolescent than in adult populations.[5] Complications of STD are also more common in adolescents, for example, one of every eight sexually active female adolescents develops pelvic inflammatory disease while adult women have only a one in eighty chance of developing the same syndrome.[6]

Adolescents' high risk of acquiring sexually transmitted diseases is both biologic and behavioral (Table 1). Adolescence is a time of great psychological and social change. Teenagers who begin experimenting with sexual relations may deny that they are at risk for contracting STD; they may believe they are invulnerable to such infections and thus may not initiate safer sex practices.

During adolescence, intimate relationships may be short-lived. Sorenson's study of adolescent sexual behavior revealed an adolescent tendency to engage in a practice called "serial monogamy."[7] This pattern of behavior has been noted in roughly half the female adolescents surveyed by Sorenson. Serial monogamy describes a pattern of behavior in which an adolescent will have one partner at a time, yet will have a rapid turnover in these relationships. While emotional attachment in these short-lived relationships may be quite strong, this type of behavior carries similar health risks experienced by those who have multiple concurrent sex partners. Both these groups have much higher rates of STD than do those individuals who have long-lasting monogamous relationships.

One previous study hypothesized that sexually active adolescents represent a core group with high rates of STD acquisition.[8] One reason for this may be their inability to access medical care following the onset of symptoms of STD. Many adolescents delay seeking health care because they are unaware of the symptoms associated with STD, while others may hesitate to contact a health professional because of inexperience seeking medical evaluation without the aid of a parent. Still others are unaware that confidential services are available. They may fear an evaluation for STD cannot be obtained without parental permission.[9]

Multiple studies have shown the benefits of preventing sexually transmitted diseases through the use of condoms.[10,11] Vaginal spermicides contain nonoxynol-9, an agent that is both bactericidal and virucidal.[12,13] Thus, sexually active adolescents could reduce their risk of contracting infections if they correctly and consistently used these barriers. However, condoms are not frequently used as a contraceptive by adolescents.[1] Many adolescents are unaware of the condom's effectiveness as a barrier to the transmission of serious infections such as HIV.[14] Clearly, this demonstrates the need to educate our sexually active youth about the benefits of condom use and to make condoms more available to youthful populations.

While the behavioral reasons for adolescents' increased risk of STD are quite compelling, there are significant biologic reasons for the high rates of STD. The female cervix is the target for many STD including gonorrhea, *Chlamydia trachomatis*, herpes simplex virus,

**Table 1. Risk Factors Associated with High Rates of Sexually Transmitted Diseases in Sexually Adolescents**

| |
|---|
| Denial |
| Adolescent invulnerability |
| Multiple sex partners (serial monagamy) |
| Delay in seeking health care |
| Inability to recognize and comprehend symptoms of STD |
| Poor access to barrier methods |
| Failure to use barrier contraceptives when available |
| Fear of the health care facility and examination |

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and the human papillomavirus. Microbiologic analyses reveal that the cervix, in a pubertal adolescent, has a high proportion of columnar epithelium exposed beyond the os of the cervix. As the female gets older, the columnar epithelium gradually recedes into the os. This process continues throughout adulthood.[15]

The extrusion of the cervical columnar epithelium (ectropion), in the absence of a cervical discharge, is considered a normal finding. Certain conditions, such as use of oral contraceptives, may cause an increase of ectropion.[5]

Exposed columnar epithelium increases a female's risk of contracting STD such as chlamydia,[16] because such organisms preferentially infect the columnar epithelium. Thus, in those patients having ectopy, significantly higher rates of chlamydia cervicitis are reported. It is not yet known if ectopy in adolescent females predisposes them to HIV infection.

Adolescents' failure to recognize signs and symptoms of STD, the practice of serial monogamy, and the increased exposure of endocervical columnar epithelium all work together to increase rates of sexually STD in this age group. These observations mandate a thorough evaluation of adolescents for such infections as part of their routine health maintenance examinations and when symptoms suggest a STD. Sexually active adolescents also must be encouraged to practice safer sex techniques, which include reducing the number of sex partners and increasing the use of barrier contraceptives.

### The Adolescent's Sexual History

Many physicians encounter difficulty approaching an adolescent about sexuality and STD. Because many adolescents are reticent to discuss their sexual relationships with a physician, the doctor may not be sure whether the adolescent is having sex. Even when a sexual history is attempted, the physician may not take an adequate history. Thus, the need for an STD evaluation may be overlooked. Obtaining a complete sexual history is critical not only for the detection of symptoms of but also for the discussion of family planning and for sexuality counseling.

Recent data suggest that physicians may not routinely obtain a sexual history from their adolescent patients, even from those showing symptoms of STD.[17] A study of adolescent females attending an inner city emergency room with the complaint of abdominal pain revealed that age, race, and socioeconomic status correlated with taking a sexual history. Physicians were more likely to take a sexual history in adolescents over 16 years old, in black and Hispanic patients, and in patients of lower socioeconomic status.

It is important for physicians to willingly discuss sexual issues with all adolescents. A physician must be nonjudgmental in approaching an adolescent about sexual relations. Should the patient feel uncomfortable about discussing intimate relationships with a physician, he or she may withhold valuable information. It is also important for the physician to maintain the confidentiality of the adolescent patient in order to provide the adolescent the privacy that he/she deserves and is entitled to legally.[18]

An adolescent's sexual history should include a considerable amount of information about prior and current sexual relations (Table 2). It is important to know the age of onset of sexual intercourse and the number of current and lifetime sex partners. Because the adolescent may engage in homosexual relationships, it is important to know if the sex partners are the same or opposite sex of the patient. It is important to discuss all aspects of sexual practices with the patient. Asking about oral or rectal sex should be routine in any adolescent requiring a STD work-up. Given the risks of HIV transmission, it is now crucial to ask if any of the sexual partners have used intravenous drugs, have been bisexual, or are known to carry HIV. Similarly, in HIV counseling it is important to ask about substance use, particularly intravenous drug use and shared needles, and about blood transfusions.

The physician should also ask about previous STD. Patients with recent STD are more likely to have a subsequent or recurrent infection. Contraceptive use, particularly condom use, should be assessed.

Several excellent articles discuss the adolescent pelvic and genital examinations, and the work-up, diagnosis, and management of STD.[19-26]

### HIV Counseling for Adolescents

Physicians can play a very important role in the prevention of STD and HIV infection by counseling adolescents about risk behaviors. While adolescents

**Table 2. Adolescent Sexual History**

| |
|---|
| Number of current sex partners |
| Age at first intercourse |
| Number of sex partners since first intercourse |
| Heterosexual and homosexual experience |
| Orogenital sexual contact |
| Anorectal sexual contact |
| Contraceptive use |
| Pregnancy history |
| Condom use |
| History of previous STD |

have behavioral and physiologic reasons for their vulnerability to STD, these infections are entirely preventable if risk behaviors are avoided or modified.

After obtaining an adolescent's sexual and risk-behavior history, the physician needs to assess the adolescent's risk for HIV infection. Adolescents at highest risk for HIV are homosexuals, intravenous drug users, prostitutes, or hemophiliacs.[27,28] Bisexual males and sexual partners of intravenous drug users or bisexuals are at high risk.[29,30] At presumed moderate risk are incarcerated youth and runaways.[31] The largest group of sexually active heterosexual adolescents (who do not use barrier contraceptives consistently)are at an undefined but relatively low risk. It is clear that minority, inner city youth are at greater risk for HIV infection than are suburban or rural youth,[32] especially if they have had STD. For example, in Baltimore, the seroprevalence of HIV in 15 to19 year old adolescents at STD clinics is 2 percent and 2.5 percent in males and females respectively.[33] At zero risk are adolescents who have never had sexual relations, never shared needles, and never received blood products.

It is important to educate adolescents about HIV transmission and prevention so they may be helped to avoid or modify risk behaviors. Physicians can engage adolescents in a dialogue (rather than lecture) to find out what the adolescent knows about HIV. Many adolescents have limited or inaccurate knowledge.[34-36] The physicianis should review sexual, needle, perinatal, and blood transmission using straight-forward language. He or she must discuss the difference between the asymptomatic HIV infection state and the AIDS disease and point out that the only way to tell if someone is infected is by the blood test. Then the physician should talk about prevention methods including abstinence, avoidance of sex with needle users, bisexuals, and HIV positive people, and safe sex practices.

It is very important to explore the adolescent's feelings and attitudes about condoms. If the adolescent is willing to use condoms, the physician must make sure the patient knows how to use them by providing clear, simple instructions on their use. He or she should ask the adolescent how a partner's reluctance to use condoms will be handled. It is helpful to role-play this scenario. The physician ought to discuss the role of shared needles and syringes in HIV transmission. While intravenous drug use is relatively uncommon in adolescents, a majority of teenagers have tried alcohol and marijuana.[37] The physician could discuss how substances can impair decision making and place someone in a risk situation, such as having unplanned and unprotected sexual relations.

If the adolescent has some HIV risk behaviors, the physician should discuss AIDS virus testing. A positive test means that the person has the AIDS virus in his/her body and body fluids (blood, semen, or vaginal secretions) and is contagious to other people. A negative test means that evidence of the AIDS virus does not show up in the person's blood. The physician can then explain that the test is very accurate unless the adolescent has recently acquired the virus. While most people get a positive test result within several months after HIV infection, it can take up to one year for seroconversion.[38]

The adolescent's risk behaviors for HIV should be discussed and the patient asked if he/she would like testing. Minors in Maryland can legally consent to HIV testing since AIDS is a sexually transmitted disease.[18,39] Ethically however, if the adolescent is very young or unable to understand the implications of HIV testing, family involvement in the testing decision should be encouraged.

If the adolescent wants HIV testing, he/she should give written consent. Confidentiality is a very important issue to many adolescents. The physician may want to send the adolescent to an anonymous testing site if total confidentiality cannot be guaranteed. Another testing issue is the assessment of the adolescent's social support system: how would he/she cope if his/her HIV test were positive?

If testing is done, posttest counseling is important to assess the effect of the intervention and testing and to reinforce HIV prevention methods.

> *For the majority of adolescents who are HIV negative, the key message is that they could acquire HIV in the future if they ignore HIV precautions.*

A negative HIV test does not mean the adolescent is immune to HIV or that he/she can become complacent about it. Adolescents who are cognitively concrete may have difficulty with these concepts.

Extensive counseling is necessary for HIV positive adolescents to prevent further transmission of HIV. Supportive counseling and behavioral modification are central to the management of adolescents with HIV. Abstinence, condom use, compliance with contraception, and the avoidance of shared needles are critical in preventing further spread of HIV. Similarly, partner notification is very important. Since HIV testing is voluntary and confidential, it is up to the patient to inform his/her partners or give permission for a health official to notify them.

For HIV indeterminant patients (those with a positive enzyme linked immunosorbent assay but a nonconfirmatory Western blot), the physician needs to counsel

that they may become HIV positive or may continue to have a nonspecific test result. The test should be repeated every 8 to 12 weeks, and the patient should be instructed on the precautions to be followed by an HIV positive patient.[40]

Sexually active adolescents and those using intravenous drugs are at risk of acquiring HIV, especially if they live in an area with a high prevalence of HIV and AIDS. Thus, it is crucial to identify adolescent patients who engage in or contemplate risk behaviors so they can be counseled on how to prevent HIV infection.

It is equally important to counsel adolescents who have never had sex about HIV infection. They need factual information given in a nonjudgmental style. Specifically, adolescents must be told that unprotected sex can lead to unintended pregnancy and STD including HIV infection. The physician may tell them they do not have to become sexually active during adolescence. They can protect themselves from the complications of sexual activity by remaining abstinent. However, the physician should invite them to return to the office when they think that they are going to become sexually active in order to discuss contraceptive options and safe sex practices. They also need to know they should use a condom for any intercourse they might have before returning to the physician's office. This is important since adolescents often wait many months before seeking contraceptive counseling.[13]

## Summary

Preventive counseling and anticipatory guidance for adolescents can have life-long effects by preventing unintended pregnancies, STD, and the potentially fatal AIDS infection. Because adolescents are particularly vulnerable to sexually transmitted diseases, it is very important for clinicians caring for adolescents to become comfortable in discussing sexual behaviors and in managing STD. With increased identification and counseling of adolescents at risk, it is hoped that the incidence of sexually transmitted diseases can be lowered in adolescents.

Physicians who treat adolescents are increasingly aware that sexual experimentation is widespread throughout all races, cultures, and socioeconomic classes. Thus, good medical practice requires a complete sexual history, particularly when this history has not previously been obtained.

Physicians need to be aware of the behavioral and biologic factors that may increase a teenager's risk of STD. Risk behaviors should be explored with the patient, particularly as they relate to the risk of HIV transmission. Most important, the physician should address the counseling and educational needs of the adolescent. Sexuality counseling is an ongoing process that can be provided to adolescents at each office visit. Physicians need only to be open to discussing sexuality and be prepared to evaluate adolescents as necessary for STD.

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# Adolescent Contraception

*MICHELE D. WILSON MD*

**There is an immense need for safe and effective contraception for the growing number of sexually active teenagers in this country. Oral contraceptives remain the method that adolescent women most frequently use. Physicians should encourage patients to use condoms because of their role in preventing the spread of sexually transmitted diseases (STD). Subdermal progestogen implants, not yet approved for use in this country, offer promise for the future as a safe and easily usable form of contraception for adolescents. Contraceptive counseling will be most successful when the individual's needs and specific behavioral factors are taken into account along with any medical considerations.**

Growing numbers of adolescents in the United States are becoming sexually active at a younger age. In 1978, it was estimated that 12 million adolescents were sexually active, representing a sizable increase from the 11 million sexually active adolescents in 1974.[1]

Unfortunately, adolescents who are sexually active frequently delay seeking medical advice. A study that addressed the problem of why teenage women postpone seeking contraception found that participants had sexual intercourse for the first time on an average of 16.6 months prior to presenting for contraceptive services. The most frequently cited explanation for this delay was, "I didn't get around to it." The second most common reason was fear that one's family would learn of the family planning visit.[2]

Despite their physical maturity and ability to engage in sexual intercourse, adolescents frequently are not emotionally prepared to make mature decisions about their behavior. Problems of compliance with medical regimens are the rule rather than the exception among adolescents. Furthermore, they may be unable to communicate with those individuals who can help them best in making these decisions, that is, their parents, health professionals, and sexual partners. Teenagers may lack adequate knowledge regarding their risks for pregnancy. In addition, many young persons have not developed the degree of abstract reasoning necessary for contracepting properly. They may not have the future orientation needed to plan for a potential pregnancy as a consequence of their behavior. Adolescence is characterized by risk-taking behaviors that may be expressed by sexually acting out.

It is a challenge for a young person to use any of the different techniques of contraception appropriately. Teenagers have difficulty complying with a method such as oral contraception that requires the daily ingestion of a pill. Barrier methods must be available at the time of coitus and may necessitate partner cooperation for use. Furthermore, any intravaginal contraceptive requires the user to have knowledge of female anatomy and to be comfortable with touching her body. These and other factors conspire to make it extremely difficult for adolescents to contracept successfully. The end result is that the failure rate for all contraceptive methods when used by teenagers is two or three times higher than the failure rate among older women.

An added concern that may prevent adolescents from seeking contraception is fear that their parents will learn of their family planning visits. For some teenagers, anxiety about their parents' response might prevent them from seeking medical care. Each jurisdiction addresses this issue in a specific way. The statutes in Maryland state that a minor can consent for "treatment for or advice about contraception" without parental consent.[3] Thus, the law protects the young person's right to confidentiality with regard to contraception. In fact, most adolescents will benefit from their parents' guidance in decision making about sexual activity and contraception. Parental involvement should be encouraged whenever it will benefit the young person.

### Evaluation for Contraception

Contraceptive counseling is most effective when the patient is approached as an individual with very special requirements. Each person comes in with specific contraceptive needs to be addressed. Selection of contraceptive method will reflect the patient's specific choice, extent of sexual activity, results of medical evaluation, and cognitive development.

It is important to obtain a careful history and perform a physical examination in order to delineate medical and behavioral factors that might influence contraceptive choices. The practitioner needs to determine whether there are any contraindications to use of a particular method, especially oral contraceptives. A complete gynecologic history should include age of menarche, menstrual pattern, and symptoms of dysmenorrhea. Prior use of contraception and reason for discontinuation will aid in future recommendations.

It is important to elicit a complete sexual history. For instance, a young woman or man who has not yet engaged in sexual intercourse but is feeling peer pressure to do so might be asking her/his practitioner for reassurance regarding abstinence rather than asking for contraception. A young person engaging in infrequent intercourse might be an ideal candidate for a barrier

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method. For different reasons, any teenager who has multiple partners should be counseled regarding the risk for sexually transmitted diseases (STD) and encouraged to use a barrier method, ideally condoms with a vaginal spermicide.

A complete physical exam is indicated prior to recommending a method. Particular attention should be paid to blood pressure, cardiovascular system, thyroid, and breast exam. Skin should be inspected for xanthomas, chloasma, jaundice, or scleral icterus. It is important to evaluate for liver enlargement or tenderness. Degree of pubertal development should be determined. A pelvic exam is indicated and should include a Papanicolaou smear as well as screening cultures for gonorrhea and, if available, chlamydia. Other laboratory tests to consider include syphilis serology if the patient is sexually active, and a serum lipid profile if there is a positive family history for hyperlipidemia or cardiovascular disorders.

### Selection of a Method

It is crucial to ask each adolescent what method of contraception he or she desires and is willing to use (Table 1). The choice is a delicate balance between patient preference and medical contraindications/recommendations. Nothing will be effective if the patient cannot or will not use it.

Considering only medical issues, the ideal method for all teenagers who are sexually active is a barrier method since it protects against pregnancy as well as STD. By contrast, the pill is an appropriate selection if the adolescent does not want to use a barrier method, desires oral contraceptives, and has no medical contraindications to their use. All adolescents for whom oral contraceptives are prescribed should receive a barrier method as a adjuvant for STD protection.

*Abstinence* Abstinence from intercourse is one of the most commonly selected methods of contraception and the only method with no failure rate. Additionally, the individual is not exposed to the risk of STD. Adolescents who choose this method may need added support and encouragement regarding their decision.

*Oral Contraceptives* Oral contraception is the method chosen most often by adolescents. The physician must decide between two types of pills: fixed combination and progestin-only. Fixed combination pills contain both estrogen and progestin. A variety of preparations of combined oral contraceptives with varying compositions are available. Combination pills have a failure rate of 2.0 percent each year,[4] when contraceptive effectiveness is presented as the percentage of typical users using the stated method who become pregnant in one year. All pills have 21 days of hormones followed by 7 days of taking an inert substance or taking no pill. Menses is expected during the latter 7 day period.

Fixed combination preparations contain a constant dose of estrogen and progestin for 21 days. Multiphasic pills have varying doses of either or both hormones during the cycle. Multiphasic pills are designed to lower the total dose of hormones while avoiding midcycle bleeding, which often occurs with low-dose pills. Biphasic pills have two phases of hormonal treatment while triphasic pills have three different phases. Progestin-only or mini-pills are less effective than combined oral contraceptives. Menstrual irregularities occur in one-third to one-half of users. Thus, decreased effectiveness and bothersome side effects limit their use with teenagers.

The ideal choice for an adolescent beginning therapy is a low dose combined oral contraceptive that has 35 mgm or less of estrogen coupled with a low potency progestin (Table 2). These pills offer excellent protection against pregnancy while minimizing significant side effects.

Oral contraceptives offer the advantage of being ingested at a time separate from intercourse. They offer protection against benign breast disease, ovarian and uterine cancer, ovarian cysts, iron deficiency anemia and gonococcal salpingitis.[5] However, patients with any of the following conditions should not receive oral contraceptives: thrombophlebitis, a history or presence of thromboembolic disorders, known or suspected carcinoma of the breast, estrogen-dependent neoplasia, cerebral vascular or coronary artery disease, undiagnosed abnormal genital bleeding, pregnancy or liver tumor.

Conditions for which the individual may receive oral contraceptives but with careful medical follow-up include the following: severe headaches, hypertension, diabetes mellitus, gallbladder disease, sickle cell disease, elective major surgery (within the next four weeks), or long leg cast.

**Table 1. Available Contraceptive Methods and Their Effectiveness**

| | Failure Rate* (percent) |
|---|---|
| Abstinence | 0 |
| Progestogen implants | <1 |
| Oral contraceptives | 2 |
| Intrauterine device | 5 |
| Condoms | 19 |
| Vaginal spermicides | 18 |
| Diaphragm | 19 |
| Contraceptive sponge | 10- <20 |
| Natural family planning | 24 |

* Percent of typical women users who become pregnant accidently during the first year of using the given contraceptive method.

Many women will experience side effects that, although bothersome, do not contraindicate oral contraceptive use. A common symptom is breakthrough bleeding or spotting for the first few months after initiating pill use. Other women may complain of nausea or weight gain. When a young woman begins oral contraceptives for the first time, it is prudent also to provide a second method such as a barrier method. Many teenagers will discontinue their pills without medical advice and will benefit from having another method easily available for use.

There has been particular concern for the youngest teenagers in regards to hormonal intake. The greatest consideration is for mortality attributable to oral contraceptive use. For women under 20 years old, the pill is much safer than carrying a pregnancy to term. The mortality rate associated with pregnancy and childbearing is 7 women per 100,000. Use of oral contraceptives by a nonsmoking teenager has a mortality rate of 0.5 per 100,000 and, by a smoker, it has a mortality rate of 2.4 per 100,000. Use of the condom alone has a mortality rate of 1.1 per 100,000. (The mortality rate represents the risks associated with pregnancy if the method fails.) However, the mortality rate for barrier methods (condom or diaphragm) is virtually zero when accompanied by first trimester abortion for any failure.[6]

The second issue in prescribing oral contraceptives to young women is whether the pill will interfere with maturation of the endocrine axis. There is no evidence that early pill use will adversely affect long-term fertility. Ideally, a young woman should have developed to Tanner Sexual Maturity Rating Stage IV or V, attained menarche, and established regular ovulatory cycles for a minimum of one year prior to initiation of oral contraception.

*Intrauterine Device* The intrauterine device (IUD) has been less frequently recommended for young women despite its failure rate of only 5 percent.[4] Use of the IUD confers an increased risk for upper genital tract infections, ectopic pregnancy, and infertility. At the present time, most practitioners do not insert an IUD in a young woman who has not yet completed childbearing.

*Condom* The second most commonly chosen method by teenagers is the condom. The failure rate for typical users is 19 percent per year.[4] Condoms are safe, inexpensive, and available without a prescription. Condoms offer the important advantage of requiring male involvement in family planning. Their impact in reducing the spread of STD is important to emphasize to both female and male adolescents. In vitro studies have demonstrated the ability of latex condoms to decrease the spread of human immunodeficiency virus (HIV) and herpes virus.[7,8] By contrast, viruses can pass through natural skin condoms. Furthermore, women who use barrier methods have been shown to be at reduced risk of hospitalization for pelvic inflammatory disease relative to those women who either used other methods of contraception or did not contracept.[9] Disadvantages of condoms mentioned by patients include diminished sensation, interruption of coitus, and rare allergic reaction to rubber.

*Vaginal spermicides* Vaginal spermicides are available in the form of foam, cream, or suppository that have spermicidal properties. Vaginal contraceptives are available over the counter at low cost. Typical users have a failure rate of 18 percent.[4] Most practitioners suggest that foam and condoms be used jointly to augment the effectiveness of each individual technique. Nonoxynol-9 (the active ingredient in most vaginal contraceptives) has been demonstrated to inhibit the growth of several STD agents including herpes simplex, gonorrhea, trichomonas, chlamydia, and HIV.[10]

*Diaphragm* The diaphragm, which is selected by only a small percent of adolescents, has a failure rate of 19 percent.[4] It provides some protection against STD. The diaphragm must be available and used for each act of coitus to be effective. An increased rate of urinary tract infections and a rare case of toxic shock syndrome are risks of its use.

*Contraceptive sponge* The contraceptive sponge is a newly available method, having recently been approved for use. The failure rate is 10 to 20 percent.[4] Unlike the diaphragm, it does not require a medical visit or pelvic exam and can be purchased over the counter. Vaginal irritation, vaginal discharge, high cost, and a slightly increased risk of toxic shock are all factors that may limit its use.

*Coitus interruptus* Coitus interruptus (withdrawal) is used by many adolescents with poor results. Its advantages include easy accessibility and absence of needed advance planning. The failure rate in typical users is 23 percent.[4] Many couples complain that it interrupts sexual pleasure.

**Table 2. Low Dose Oral Contraceptives**

| |
|---|
| Monophasic |
| Ovcon 35 |
| Nordette |
| Brevicon/Modicon |
| Ortho Novum/Norinyl 1/35 |
| Loestrin 1.5/30 |
| Loestrin 1/20 |
| Demulen 1/35 |
| Multiphasic |
| Ortho Novum 7/7/7 |
| Triphasil/Tri-Levlen |
| Ortho Novum 10/11 |
| Tri-Norinyl |

*Natural family planning* Natural family planning methods demand an awareness of the fertile days of the menstrual cycle and ability to abstain from intercourse during those days. Many young women have irregular cycles that limit the utility of this technique. It has a failure rate of 24 percent.[4]

*Progestogen implants* Subdermal progestogen implants known as Norplant have been tested but not yet approved in the United States. During trials in older women, the failure rate has been less than 1 percent.[11] The implant, made of slow release progestin in a silastic capsule, is inserted under the skin, and is effective for three years. This method offers the advantage that it can be inserted and removed easily and requires no motivation once in place. The major disadvantage is irregular menstrual bleeding, which occurs in 60 percent of users.

## Conclusion

There is a tremendous need for safe, effective, and acceptable methods of contraception to be easily accessible to sexually active young persons. An assessment made in privacy and confidentiality will help ascertain which adolescent plans to become or is sexually active. If contraception is needed, counseling regarding an appropriate method is indicated. In addition to obtaining a history and physical exam to determine if any methods are contraindicated medically, it is extremely important to elicit what the patient desires. The physician needs to assess the level of maturity as well as ability and willingness of the individual to use a given method. The choice must be mutually satisfactory to the young person and clinician. Ultimately, the patient must be both comfortable with the method and willing to use it consistently.

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# Peer Counseling with Adolescents

*ELAINE M. RUBENSTEIN PhD, LCSW and SUSAN PANZARINE PhD, RN*

**Peer counseling with trained nonprofessionals is particularly appropriate for adolescents because of their susceptibility to peer influence. Teenage role models having positive characteristics may exert desirable influences on their peers. A peer counseling program could be a valuable resource for a practitioner with a teenage patient having social or academic problems.**

Peer counseling involves the use of trained nonprofessionals indigenous to a target population as helping agents.[1] Well-functioning individuals use problem-solving and listening skills along with knowledge of issues specific to the target population to help or to counsel others of similar age and circumstances.[2] The rationale for peer counseling assumes: (1) peers model one another's behaviors and attitudes and establish standards of behavior that can have a beneficial effect, (2) peers have a good capacity for empathy among themselves because they have similar life situations, (3) peer counselors can provide a link between services and the target population they serve by facilitating communication, and (4) peer counseling is a two-level approach that enhances personal growth in the counselors as well as the counselees.[3]

Peers can provide friendship, value-building, and reality testing experiences. Thus, teenage role models who have positive characteristics may exert a desirable influence on their peers. In addition to role modeling, the other key element to a peer counseling relationship is social and emotional support. Communication of a sense of caring, warmth, and empathy is an essential component of the peer counselor's role. Emotional support fosters the development of the relationship and motivates the younger teen to emulate his/her positive model.

Although the actual implementation of peer counseling programs varies widely, this method has been used successfully in tutoring children with learning difficulties,[4] changing behavior,[5,6] improving school functioning,[7-13] and improving adolescent contraceptive compliance.[14] Peer counselors can assume many different roles, enabling the model to be useful in a variety of circumstances. In the programs cited above, some counselors were tutors focusing primarily on academic progress, while others were health aides, "crisis workers," group facilitators, or sources of referral and service information.

## Evaluation Lacking

Unfortunately, rigorous empirical evaluation is absent, for the most part, in the peer counseling literature. Much of it is anecdotal, relying on self-reported general satisfaction of the participants. A few have used behavioral data such as improvement in grades, class attendance and number of disciplinary referrals for counselees as indicators of the success of their programs.[12,15] Pre/post test designs have been used in an effort to determine peer counseling effectiveness. When data were collected to evaluate change on the part of the counselors, findings suggested an overall increase in communication skill level from pretraining to the end of the program.[16] Data on both counselors and counselees implied that neither school nor personal adjustment improved significantly. Results suggested overall group improvement in academic achievement (as opposed to school adjustment) and emotional support, as well as in peer relationships and self-image,[8,9,17] however, the latter two indicators came from a self-reported checklist that did not yield statistical data.

Very few studies have used an experimental design to provide a more valid evaluation of the peer counseling model. In one exception, Kelly[7] reported a significant gain in school interest for both counselors and counselees as compared to controls, but no increases in self-concept. Two other investigators used randomly assigned control groups to evaluate counselees in their programs. Jay et al. found that adolescents counseled by a peer in a family planning clinic had higher levels of compliance than did those counseled by a nurse.[14] Schweisheimer and Walberg evaluated the effectiveness of peer counseling on three groups of students: mentally handicapped, mainstream, and socially maladjusted. Findings suggest all three groups of counselees showed improvement in attendance and decisiveness as compared to the control group.[1]

## Peer Project

Although the literature is not strong on empirical evidence evaluating the effectiveness of peer counseling programs, data show tentative evidence of the model's effectiveness in a variety of circumstances. Based on this, we designed program a program using the peer counseling model to further evaluate its efficacy. The Peer Project was developed to address the serious problem of teenage pregnancy in Baltimore. It is funded by an Illness Prevention grant from the Health Services Cost Review Commission of the State of Maryland.

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During the first year, the program was conducted at one of the university affiliated adolescent clinics that served both pregnant and sexually active teens. The goals of the project were to reduce the rate of first and subsequent pregnancies in high-risk sexually active adolescents and young adolescent mothers and to promote school continuation in these same young women. Older adolescents, both teenage mothers and never pregnant, were trained to act as peer counselors to two young adolescents each. Teenage mothers were paired with young pregnant adolescents. The counselors were expected to meet with their young counselees every week for two hours each. Visits occurred in the community, either at the younger girl's home, on walks, or on trips to local shopping centers. A year-long commitment of the participants was agreed on at recruitment. Both counselors and counselees were randomly assigned to intervention and control groups to assess the impact of the project on both groups of participants.

### Selection of Counselors

Most programs reviewed in the literature employed various screening strategies to identify appropriate peer counselors. Some programs chose youth at risk for dropping out of school hoping to improve the teens' self-concept and to keep them in school.[1,7] At the other end of the continuum, some programs chose teenagers who were functioning well above average.[14,15] We used these selection criteria: articulation and interest in helping others, good attendance record, ability to make the weekly time commitment, and consistency in using an effective method of birth control if sexually active. The counselors were to be role models for their younger peers.

Counselees also must be selected carefully. For example, in our peer counseling program (based at the university), high-risk younger teens were the targeted counselees. High risk was defined as being 15 or younger and either sexually active or having a sibling or parent who was pregnant as an adolescent.

A nationwide survey of colleges and universities using peer counseling programs found that many students had inadequate training prior to becoming counselors.[2] In programs reviewed in the literature there was wide variation in the length and intensity of the training process, varying from one to twenty-three sessions. All used group-training as the method of choice, and had some generic goals in common, including training in communication skills (such as active listening and empathy), problem-solving skills, and knowledge about the particular group they were addressing (for example, contraceptive information, problems associated with learning disabilities, and services in the community available to the target group). Role playing has been found to be a useful training tool to help the novice counselor improve listening skills, practice empathic responses, and recognize personal values that may conflict with those of a counselee.

### Peer Project Training

We use an eight-week training component in the Peer Project. Topics covered include clarification of the role of peer counselor, values clarification, listening skills, empathic responses, peer pressure, and adolescent depression and suicide. Role playing is used extensively during the training process. Training does not end after the peer counselors are assigned a younger counselee, however. Ongoing supervision focuses on continued training in counseling skills. The project uses weekly group counselor meetings to provide (1) close supervision of the counselor-counselee contacts; (2) continued training, information, and discussion about a variety of areas including counseling skills, birth control, sexually transmitted diseases, the importance of staying in school, and planning for the future; and (3) ongoing support and encouragement to the counselors in establishing and maintaining their relationships with their counselees. A group format is used since each peer counselor was viewed as a source of support and information for one another. In addition, limitations of the peer counseling role and reasons for immediate consultation with professional staff are emphasized, such as possible suicidal ideation. Access to the program's staff for such consultation is an important aspect of the project.

The first year of the program is being evaluated. School attendance, promotion to the next grade, and avoidance of pregnancy are being assessed for both the counselors and the counselees.

For the second year, the Peer Project will be based in a city high school, linking upperclassmen with entering freshmen so that initial and continued contacts could, for the most part, take place on school grounds. This project is being done on a demonstration basis with the goal of implementing it in other Baltimore City high schools.

A peer counseling program could be a valuable resource for the practicing physician if an adolescent patient is having difficulty in an area of social or academic functioning. There is less stigma attached to this than to referrals to professionals. Patients within a practice who have similar problems also might be paired to act as mutual supports. This model is flexible and may be used in many settings and for a variety of patient problems.

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# Sources of Parenting Education for Adolescent Mothers

*ANNE K. DUGGAN ScD and JANET B. HARDY MDCM*

**The importance of parenting education for adolescent mothers is shown by the number of teenagers who give birth each year and elect to keep their child as well as by the adverse social and health outcomes found in children born to teenagers. We assessed the types, sources, and adequacy of parenting education offered to black and white adolescent mothers in Baltimore and found significant differences in their child-care education. Lack of parenting education was not attributable to lack of access to care. Overall, large proportions of adolescent mothers do not recall receiving basic parenting instruction, and many express the need for additional parenting education.**

Teenage childbearing and childrearing are issues of enormous magnitude in the United States. Nationwide, nearly a half million teenagers give birth annually, and almost all choose to keep their child rather than opt for adoption. Overall, 20 percent of first births among whites and 43 percent of first births among blacks are to women under 20 years old.[1] Although the teenage birth rate decreased from the early 1970s to the early 1980s, due largely to the availability of abortion, it has leveled off in recent years.[1]

At the same time, the proportion of births to unmarried teenage mothers has increased steadily. In the mid-1960s, 57 percent of teenage mothers were unmarried at the time of conception of their first birth; 24 percent were unmarried at the time of the birth. By 1980, 76 percent of teenage mothers were unmarried at the time of conception, and 50 percent were unmarried at the time of their first birth. Among blacks, the proportion of unmarried teenage mothers at the birth of their first child rose from 58 percent to 89 percent over this period.[2]

The importance of parenting education for adolescents is demonstrated not only by the number of births to teenagers but also by the health, education, economic, and social problems to which teenage families are particularly vulnerable.[3-5] Teenage mothers score lower on observed and self-rated maternal competence behaviors[6] and are less likely than older mothers to teach their children skills in the later part of the first year of life.[7] Adolescent mothers are likely to receive little support from their child's father. Among adolescent mothers in Baltimore, 40 percent believed the father spent too little time with their child, and 48 percent thought he spent too little effort in raising their child in the first year of life.[9]

As early childbearing is negatively associated with social class, the unfavorable outcomes of children born to teenagers might be a function more of poverty than maternal immaturity. Even so, whether because of inexperience or social disadvantage, teenage mothers need instruction, guidance, and support in raising their children. The purpose of our study was to describe the types of parenting education received by adolescent mothers in an urban area, using Baltimore as a model, with an eye to identifying service needs and possible strategies for meeting them.

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## Methods

Data were collected as part of a study of resource use by pregnant and parenting adolescents in Baltimore. Study methods, detailed earlier,[8,9] are summarized here.

The subjects were young women who gave birth in Baltimore in 1983 at age 17 or younger and who chose to keep their child. Baltimore City files of certificates of live birth were used as the sampling frame. A random sample was selected (n = 529), with oversampling of births to white adolescents, adolescents 15 and younger, and those experiencing a second live birth. This was done to achieve adequate numbers for meaningful comparisons of these population subgroups. Because the sample was drawn from public records, local officials required that subjects be notified of the study first by certified mail with a return postcard for use by those who did not wish to participate. Adolescent mothers who did not return the postcard were home visited by a study interviewer at three months following delivery and were asked for signed informed consent for study participation.

Survey data were collected through structured home interviews with the adolescent mothers at 3 and 15 months postpartum. The interviewers solicited information on social, educational, and health-related aspects of the adolescent's course prior to and during pregnancy as well as during the 15 months following the birth of her child. Of particular relevance for the analyses reported here, was the identification of specific sources of prenatal care and regular child care used by the adolescent.

In addition, the interview gathered information on the types of parenting education the adolescent received. Specifically, the adolescent was asked whether she ever received instruction in each of seven content areas at any time since learning she was pregnant. Those who responded affirmatively were asked whether instruction was received from each of six sources: site of prenatal care, site of regular child care, a class at school, the adolescent's mother, another member of the family, or

some other place. In addition, each adolescent was asked whether she had enough information in each area or whether she needed more.

In the analysis, weights were applied to the study sample to compensate for the disproportionate sampling scheme. In the bivariate analyses reported here, chi square was used to test for statistical significance in comparisons of the types, sources, and adequacy of parenting information reported by the young mothers.

## Results

Of the original sample of 529 adolescent mothers, 389 (74 percent) were interviewed at 3 months postpartum. Sixty of the 140 nonparticipants returned the refusal postcard, 26 could not be located, 22 had moved out of the area, 4 had put their child up for adoption after the child was 2 months old, 2 had children who had died within the first 3 months of life, and 26 declined study participation when visited by the home interviewer. Study participants and nonparticipants were compared and found not to differ significantly in terms of the sociodemographic and medical variables contained in the birth certificates (for example, race, last grade completed, birth weight, gestational age, apgar scores, onset of prenatal care, method of delivery).

The proportion of adolescent mothers who received parenting instruction varied enormously by educational content area, source of instruction, and race (Table 1). First, the role of the family as a source of information varied by content area. While 70 percent of the adolescents recalled receiving instruction from family members on what to feed a baby, only 30 percent recalled having received information on breast-feeding from their family. The adolescent's likelihood of receiving instruction from her family did not vary significantly by race, except how to tell if the baby were sick: black families were more apt to have given instruction than were white.

The proportion of adolescents who recalled parenting instruction from their source of prenatal care also varied by content area, ranging from 41 percent (dressing an infant, taking a temperature) to 68 percent (breast-feeding). In every content area, a significantly larger proportion of black adolescents recalled receiving parenting instruction from their prenatal care site than did white adolescents. As a source of instruction, the role of the child's regular source of care differed from that of prenatal care site in some, but not all, content areas. Child care providers rarely were a source of instruction on breast-feeding (15 percent) but almost always were cited for other instruction on what and how to feed a child (84 percent). As with prenatal care sites, instruction at child care sites was recalled significantly more often by black than white adolescents for each content area.

For each of the seven content areas examined, at least 72 percent of the adolescents reported receiving some instruction. Because of the racial differences in instruction received in prenatal and child care sites, the proportion of adolescents receiving any instruction was significantly higher for black than white adolescents in all areas except taking a child's temperature. The most

**Table 1. Proportion of Adolescent Mothers Reporting Receipt of Parenting Education by Content of Instruction, Source of Instruction and Race**

| Content of Instruction and Source | All (n=389) | Black (n=272) | White (n=117) | p |
|---|---|---|---|---|
| How to dress an infant | | | | |
| Family | 65 | 67 | 55 | NS |
| Source of Prenatal Care | 41 | 52 | 14 | *** |
| Source of Child Care | 38 | 50 | 11 | *** |
| Any Source | 80 | 83 | 65 | ** |
| How to tell if infant is sick | | | | |
| Family | 59 | 63 | 38 | *** |
| Source of Prenatal Care | 50 | 61 | 25 | *** |
| Source of Child Care | 61 | 71 | 38 | *** |
| Any Source | 78 | 83 | 56 | *** |
| How to take baby's temperature | | | | |
| Family | 54 | 55 | 52 | NS |
| Source of Prenatal Care | 41 | 52 | 15 | *** |
| Source of Child Care | 62 | 70 | 45 | *** |
| Any Source | 86 | 86 | 87 | NS |
| Importance of holding/ touching/talking to infant | | | | |
| Family | 46 | 46 | 45 | NS |
| Source of Prenatal Care | 56 | 64 | 39 | *** |
| Source of Child Care | 52 | 63 | 27 | *** |
| Any Source | 81 | 85 | 64 | *** |
| How to make house safe for a baby | | | | |
| Family | 46 | 47 | 44 | NS |
| Source of Prenatal Care | 50 | 58 | 30 | *** |
| Source of Child Care | 44 | 54 | 20 | *** |
| Any Source | 72 | 77 | 54 | *** |
| What and how to feed a baby | | | | |
| Family | 70 | 72 | 60 | NS |
| Source of Prenatal Care | 58 | 66 | 39 | *** |
| Source of Child Care | 84 | 87 | 76 | ** |
| Any Source | 93 | 95 | 83 | *** |
| Breastfeeding | | | | |
| Family | 30 | 28 | 34 | NS |
| Source of Prenatal Care | 68 | 73 | 54 | *** |
| Source of Child Care | 15 | 16 | 12 | NS |
| Any Source | 80 | 82 | 73 | NS |

NS Not Significant; * p .05; ** p .01; *** p .001

pronounced difference was in the area of mother-child interaction (the importance of holding, touching, and talking to a baby) where 85 percent of black adolescents but only 64 percent of white recalled receiving information.

Racial differences in parenting instruction provided as part of prenatal and child care might be attributable to differences in the types of sites used. Of particular interest were the use of and the levels of instruction offered by the city's three comprehensive adolescent pregnancy programs and by private physicians. The types of sites used by black and white adolescents were examined to determine what parenting information was available to each race (Table 2).

All but 2 percent of the adolescent mothers reported receiving prenatal care. Nearly a third of both black and white adolescent mothers were enrolled in one of the city's three comprehensive adolescent pregnancy programs for prenatal care. Enrollment in a comprehensive program varied by maternal age. Two-fifths of those 15 years of age or younger at delivery were enrolled in a comprehensive program as opposed to only one-quarter of those 16 or 17. Private physicians provided prenatal care to 13 percent of white adolescents but only to 7 percent of black adolescents. Finally, 60 percent of the adolescents received their care from other sources, which included hospital clinics, health department clinics, neighborhood/community health centers, and health maintenance organizations.

Two percent of the adolescent mothers had no regular source of care for their infant by three months postpartum. Only one in eight adolescents received care for their child at a comprehensive adolescent pregnancy program. Virtually all those who did were black, with only 2 percent of white adolescents enrolled in comprehensive programs following delivery.

The youngest mothers were more likely to receive continuing care for their child through a comprehensive adolescent pregnancy program. Infants born to white adolescents were much more likely than their black counterparts to receive care from a private physician. Overall 10 percent of the infants were followed by private physicians, including 7 percent of black infants and 22 percent of white infants. A variety of other child care sources were used by the remaining three-quarters of the children, including hospital-based pediatric clinics, community and neighborhood health centers, health department clinics, and health maintenance organizations.

The proportion of adolescent mothers who recalled each type of instruction was calculated for each type of site (Table 3). Overall, during both the prenatal period and as part of child care, adolescents enrolled in comprehensive adolescent pregnancy programs were the most likely to recall receiving instruction in each content area. At the prenatal level, those receiving care from a private physician were far less likely to recall instruction than were those enrolled in either a comprehensive program or other type of prenatal care site. On the other hand, private physicians and other sites for child care did not vary as sources of parenting information.

Among those receiving prenatal care in a comprehensive adolescent pregnancy program, black adolescents were more likely than white to recall having received parenting instruction in each area except breast-feeding. There were too few white adolescents continuing comprehensive program enrollment after delivery to determine whether this observation held true for them.

Black adolescents receiving prenatal care from private physicians were more likely than their white counterparts to recall receiving information in three of

**Table 2. Percent Distribution of Source of Prenatal Care and Source of Well Child Care by Race and Age of Mother**

| | | Race | | Age in Years at Delivery | | |
|---|---|---|---|---|---|---|
| | All (n=389) | Black (n=272) | White (n=117) | <15 (n=123) | 16 (n=92) | 17 (n=116) |
| Source of Prenatal Care | | * | | * | | |
| None | 2 | 2 | 1 | 4 | 0 | 2 |
| Comprehensive Adol preg pgm | 30 | 30 | 31 | 41 | 26 | 26 |
| Private Physician | 8 | 7 | 13 | 5 | 8 | 8 |
| Other | 60 | 61 | 55 | 50 | 66 | 64 |
| Regular Source of Child Care | | *** | | * | | |
| None | 2 | 2 | 3 | 1 | 2 | 2 |
| Comprehensive Adol preg pgm | 12 | 14 | 2 | 20 | 11 | 5 |
| Private Physician | 10 | 8 | 22 | 10 | 6 | 12 |
| Other | 76 | 76 | 73 | 69 | 81 | 80 |

* $p < .05$ *** $p < .001$

**Table 3. Proportion of Adolescent Mothers Receiving Parenting Education by Content Area, Source of Prenatal and Well Child Care, and Race**

| Race and Content of Instruction | Source of Prenatal Care | | | | Source of Child Care | | | |
|---|---|---|---|---|---|---|---|---|
| | CAPP | PMD | Other | p | CAPP | PMD | Other | p |
| All Adolescent Mothers (N) | (138) | (33) | (202) | | (46) | (61) | (271) | |
| How to dress an infant | 50 | 18 | 38 | ** | 62 | 36 | 35 | ** |
| How to tell if infant is sick | 58 | 21 | 49 | *** | 83 | 50 | 60 | ** |
| How to take baby's temperature | 46 | 19 | 41 | * | 78 | 54 | 62 | * |
| Importance of hold/touching/ talking to baby | 73 | 26 | 50 | *** | 81 | 40 | 50 | *** |
| How to make house safe | 56 | 26 | 50 | ** | 76 | 40 | 35 | *** |
| What and how to feed a baby | 72 | 18 | 55 | *** | 93 | 84 | 76 | NS |
| Breast-feeding | 86 | 41 | 63 | ** | 31 | 10 | 14 | ** |
| Black | (97) | (18) | (147) | | (43) | (28) | (194) | |
| How to dress an infant | 59 | 33 | 49 | NS | 66 | 56 | 46 | * |
| How to tell if infant is sick | 67 | 33 | 60 | * | 87 | 64 | 68 | NS |
| How to take baby's temperature | 55 | 23 | 53 | * | 81 | 75 | 66 | NS |
| Importance of hold/touching/ talking to baby | 78 | 29 | 58 | *** | 84 | 56 | 59 | ** |
| How to make house safe | 62 | 29 | 59 | * | 79 | 50 | 49 | ** |
| What and how to feed a baby | 78 | 25 | 63 | *** | 92 | 83 | 87 | NS |
| Breast-feeding | 89 | 46 | 69 | *** | 31 | 18 | 13 | ** |
| White | (40) | (15) | (55) | | ( 3 ) | (33) | (77) | |
| How to dress an infant | 28 | 0 | 8 | ** | | 19 | 8 | NS |
| How to tell if infant is sick | 38 | 7 | 20 | * | | 38 | 38 | NS |
| How to take baby's temperature | 25 | 13 | 8 | NS | | 36 | 49 | NS |
| Importance of hold/touching/ talking to baby | 60 | 22 | 29 | ** | | 27 | 27 | NS |
| How to make house safe | 41 | 22 | 24 | NS | | 22 | 18 | NS |
| What and how to feed a baby | 57 | 8 | 33 | ** | | 70 | 77 | NS |
| Breast-feeding | 80 | 35 | 46 | *** | | 3 | 16 | NS |
| Significance (by race) | | | | | | | | |
| How to dress an infant | ** | * | *** | | NA | ** | ** | |
| How to tell if infant is sick | ** | NS | *** | | NA | NS | NS | |
| How to take baby's temperature | ** | NS | *** | | NA | ** | ** | |
| Importance of hold/touching/ talking to baby | * | NS | *** | | NA | * | * | |
| How to make house safe | * | NS | *** | | NA | * | * | |
| What and how to feed a baby | * | NS | *** | | NA | NS | NS | |
| Breast-feeding | NS | NS | *** | | NA | NS | NS | |

CAPP = Comprehensive Adolescent Pregnancy Program, PMD = PrivatePhysician, Other = All other sites.
Percentages not calculated due to small denominator. Only PMD and Other sites included in testing for difference among sites.
NS Not Significant; * p .05; ** p .01; *** p .001

the seven content areas. In comparing black and white adolescents who received child care from private physicians, the former were significantly more likely to recall parenting instruction in all areas except what and how to feed a baby. Among those receiving prenatal care from other sources, blacks were more likely to recall parenting instruction in all areas except what and how to feed a baby. This pattern was repeated for those receiving child care from other sources.

To explore the adequacy of the parenting instruction, we compared the proportion of adolescents who believed they needed more information in each content area to those receiving and not receiving instruction in their prenatal and child care sites (Table 4). For each content area, those who did not receive instruction from their source of prenatal care were significantly more likely to think they needed more information. With the exception of information on breast-feeding, the same pattern was found in comparing those who did and did not receive instruction from their source of child care.

## Discussion

In one urban area, despite the availability of prenatal and pediatric care in general and three comprehensive adolescent pregnancy programs, many adolescent mothers lacked rudimentary parenting instruction. The lack of parenting education cannot be attributed to lack of access to care, for only 2 percent of those surveyed reported they lacked prenatal care, and similarly, only 2 percent reported no regular source of pediatric care three months following delivery.

Parenting education was measured at three months postpartum via maternal reports that instruction was received. Some mothers may have reported receiving instruction that was not received, thereby yielding inflated estimates. This is doubtful, since the interviewers maintained a neutral attitude throughout the interview and since responses to other questions were found to be

reliable when compared with other sources of information. To the extent that some mothers might not have recalled instruction they received, the figures reported here are underestimates of instruction given. On the other hand, the value of instruction that is not remembered is doubtful.

Adolescents who received parenting instruction were less likely to feel they needed more information than those who did not. Yet both groups of young mothers felt a need for instruction on the technical aspects of childrearing (how to make the house safe for a baby, how to tell if an infant is sick) rather than on the interactive aspects of mothering an infant (breast-feeding and the importance of holding/talking to an infant). If this indicates the young mothers' lack of appreciation of the importance of early interaction for child development, it underscores the need to emphasize this aspect of parenting as part of prenatal and pediatric care. Less than half the adolescents reported receiving parenting education instruction on interaction from their family; less than a third recalled receiving information on breast-feeding from their family.

**Table 4. Proportion of Adolescent Mothers Who Feel They Could Use More Parenting Information, by Content Area, Receipt of Information, and Source**

| Content Area | Received Parenting Instruction from: Source of Prenatal Care Yes | No | p | Source of Child Care Yes | No | p |
|---|---|---|---|---|---|---|
| How to dress an infant | 8 | 20 | ** | 9 | 20 | ** |
| How to tell if infant is sick | 28 | 53 | *** | 28 | 61 | *** |
| How to take baby's temperature | 15 | 37 | *** | 17 | 45 | *** |
| Importance of holding/touching/talking to infant | 6 | 17 | ** | 5 | 17 | ** |
| How to make house safe for a baby | 16 | 47 | *** | 16 | 44 | *** |
| What and how to feed a baby | 8 | 29 | *** | 14 | 32 | *** |
| Breast-feeding | 11 | 20 | * | 13 | 14 | NS |

NS Not Significant; * p .05; ** p .01; *** p .001

It is unclear why black adolescent mothers were so much more likely than white to recall most types of parenting instruction. This relationship held true even when controlling for source of prenatal and pediatric care. However, there was no difference by race in receipt of parenting instruction from family. Compared with those enrolled in comprehensive programs for prenatal care, black adolescents' higher recall rate might be attributed to their greater likelihood of continuing in the program following their child's birth. The difference in recall between those receiving care from a private physician vs. care from other sources is yet to be explained.

Since the measure of parenting instruction is limited to maternal recall of the receipt of instruction, many important but more subtle aspects of parenting education have not been assessed. There is no way of knowing, for example, whether the instructions given were correct. If they were correct, the adolescent mother may not have understood them. Some of the adolescent mothers might have had prior beliefs that were contradictory to the instruction given. Those receiving parenting education from multiple sources might well have had to deal with contradictory instruction. The measures used here do not reflect whether the adolescent mother believed the parenting instructions she received. Finally, and perhaps most crucial, the measures used here do not reflect the adolescent's actual parenting behavior and the extent to which it was affected by instruction or a lack of it. The association between maternal report of parenting instruction and the child's health care use and health status in the first year of life is the focus of current analyses.

While evidence from prior research strongly suggests teenage mothers' need parenting instruction, there is little rigorous evaluation of the impact of parenting programs on maternal behaviors and child development. Research has shown that parenting programs can improve knowledge without impacting on parental attitudes.[10] Education provided as part of prenatal care affects short-term but not intermediate or long-term maternal behaviors[11] This, and the positive influence on child development of parenting education provided to adolescent mothers as part of well-child care underscore the importance of continuing education as part of pediatric care.[12]

Effective parenting requires motivation, knowledge, and positive reinforcement. Health care providers play an essential role in this process, beginning with prenatal care and continuing through child care. The provider's attention to parenting education can help a teenager appreciate the importance of the role of parent.

A program of instruction and anticipatory guidance can dispel the young mother's fears and misunderstandings and prepare her for the next stages of her child's development. The provider's ongoing concern with the teenager's parenting experience and support in handling problems can do much to assure healthy family interaction, growth, and development. Finally, concerned providers can be excellent role models for adolescents.

In the concluding recommendations of its two-year interdisciplinary study, the Panel on Adolescent Pregnancy and Childbearing of The National Research Council urged that parenting education for teenage parents, especially those from severely disadvantaged backgrounds, receive special attention and emphasis.[3] Certainly, it would be naive to assume that parenting education by health care providers, in itself, is sufficient for the needs of teenage parents. Effective parenting is not possible without the instruction, advice, and support of the health care professionals responsible for the teenager's prenatal care and her child's regular pediatric care.

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# Inner City Teenagers' Exposure to Violence: A Prevalence Study

*JACK GLADSTEIN MD and ELISA J. SLATER PhD*

**Violence, a pervasive part of our society, has myriad social, medical, and behavioral consequences. Our study revealed that, on the average, adolescents were victimized 1.42 times, witnessed 5.32 criminal episodes, and knew 11.52 individuals who had been victimized. Because inner city teens are exposed to an alarming amount of violence, health professionals should inquire about adolescents' exposure to violence as part of a routine social history.**

Adolescents often are characterized by their risk-taking behavior. They frequently fail to consider future consequences of their behavior, tend to believe that "bad things" will not happen to them, and experiment with alcohol and drugs. In combination, these factors can contribute to impaired judgment and place teenagers at risk for being in potentially dangerous situations.[1]

Homicide is the second leading cause of death for youths between 15 and 24 years old.[2] The incidence rate for black teenagers (72.5/100,000) far exceeds the rate reported for whites (13.2/100,000).[3] Firearms are involved in 75 percent of these homicides, and 15 percent are knife related.[4] As children grow older, homicides are less likely to be committed by family members. Of children murdered, over 60 percent of young children are killed by family members, but this percentage declines to 25 percent and 15 percent of 12 to 14 and 15 to 17 year olds, respectively.[5] Further, investigators claim that the ratio of nonfatal to fatal assaults may be as high as 100:1.[6] This suggests that youth are exposed to much more violence than the homicide rates indicate. There is , however, a paucity of research that examines this issue.

Almost half of a middle class, female, high school sample reported violence at home, ranging from slapping to the use of a gun or a knife.[7] Others have reported that 27 percent of teenagers between 12 and 18 years of age were victims of child abuse resulting in physical injury, and 11 percent were sexually molested.[8]

Bell et al. examined a sample of inner city medical outpatients under 18 years old. Their sample reported being assaulted (18 percent), molested (5 percent), raped (2 percent), robbed (7 percent), and robbed with a weapon (1 percent). In addition, they personally knew individuals who had been molested (10 percent), raped (12 percent), robbed (34 percent), assaulted (40 percent), and murdered (19 percent).[9] Since participation in their study required a face-to-face interview and parents' consent, this sample may represent a sheltered group of teenagers who were accompanied by parents to clinic. A personal interview may have led to reluctance to fully report such personal experiences. Both these factors would contribute to an underrepresentation of violence rates.

Victimization by family members as well as witnessing violence in the home have been associated with delinquency and psychological maladjustment.[10-14] No uniform data have been collected about teenagers witnessing violence. Yet, a positive relationship has been documented between exposure to television and film violence and aggressive antisocial behavior.[15]

Overall, research addressing teenagers' exposure to violence is far from complete, and several limitations in the incidence have been reported. Homicide and child abuse rates often reflect only those cases that come to the attention of the authorities.[16] Studies based on reports of family members concentrate on parental report and ignore teenagers as a valuable source of information.[17] Further, studies often are based upon a select sample of individuals, which limits the generalizability of findings (that is, psychiatric patients,[18] juvenile delinquents,[10-14] and females only[7]).

The purpose of our study was to explore the frequency with which inner city teenagers are victims of violence, have witnessed violent acts, and know of others who have been victimized. This is the initial phase of a project that ultimately seeks to compare inner city teens' violence exposure with a more heterogeneous population obtained from a youth clinic in Ocean City, Maryland.

## Method

*Subjects* During July and August 1988, walk-in patients to the Adolescent Clinic at the University of Maryland Hospital were asked to complete an anonymous and confidential questionnaire , after giving informed consent. A total of 168 patients successfully completed the study, and 4 patients refused to participate. This walk-in clinic serves a predominately black, inner city population. Teenagers in this sample came to the hospital with a variety of physical complaints, but none were related to trauma. There were 34 (20.2 percent) male and 134 (79.8 percent) female participants; their ages ranged from 11 to 20, with a mean age of 15.90 and a mean grade level of 9.89 years.

Dr. Gladstein is an instructor and Dr. Slater an assistant professor in the Department of Pediatrics, Division of Adolescent Medicine, University of Maryland School of Medicine, Baltimore.

This work was supported in part by the Maternal and Child Health Training Grant.

*Measure* The Exposure to Violence Questionnaire we developed is designed to assess the extent to which teenagers have been exposed to these violent acts: (1) robbed without a weapon, (2) robbed with a weapon, (3) assaulted with a weapon, (4) assaulted without a weapon, (5) threatened with rape, (6) raped without a weapon, (7) raped with a weapon, (8) shot with a gun, (9) knifed, and (10) life threatened/murder. Subjects were asked if they had been the victim of any of these crimes. For the items that were affirmed, inquiries were made about whether medical or psychological care was obtained. With the exception of being threatened with rape, subjects also were asked if they personally knew individuals who had been victimized and if they had witnessed any of these violent acts.

*Procedure* On arrival at the clinic, adolescents were registered and seen by a nurse who informed them of the study and elicited their participation. Informed consent was obtained, and teenagers who agreed to participate completed the Exposure to Violence Questionnaire while waiting to be seen by a physician. The form took approximately 15 to 20 minutes to finish. All responses were anonymous. Counseling was available on request to any teen who became distressed by the questionnaire, but no requests were made.

## Results

Analysis performed with descriptive statistics reveal that a large percentage of teenagers had been exposed to violent crimes. Sixteen (9.5 percent) had been robbed without a weapon; 13 (8.1 percent) had been robbed with a weapon; 27 (16.5 percent) had been assaulted without a weapon; 14 (8.6 percent) had been assaulted with a weapon; 26 (16.0 percent) had been threatened with rape; 12 (7.4 percent) had been raped without a weapon; 2 (1.2 percent) had been raped with a weapon; 4 (2.4 percent) had been shot with a gun; 10 (6.1 percent) had been knifed; and 38 (22.9 percent) reported their life had been threatened. Between 12.1 percent and 100 percent of the victims of each of these crimes sought medical care. The number of victims receiving counseling varied widely: none of the adolescents who had been robbed with a weapon sought counseling, but all those who had been shot with a gun reported seeing a counselor (Table 1).

Although some of the participants in this sample were not victims of crime, many reported witnessing criminal activity. Forty-one (25.6 percent) and 40 (25.3 percent) teenagers had seen someone robbed without a weapon and with a weapon, respectively; 57 (35.2 percent) and 46 (28.2 percent) reported witnessing someone assaulted without a weapon and with a weapon; 13 (8.0 percent) and 9 (5.5 percent) had seen someone raped without a weapon and with a weapon; 69 (42.3 percent) indicated they had witnessed a shooting; 40 (24.8 percent) had witnessed a knifing; and 38 (23.5 percent) had seen a murder. When inquiries were made whether these adolescents personally knew someone who had been victimized, the percent of teenagers confirming items increased even higher. Seventy-nine (48.8 percent) and 85 (52.5 percent) of the subjects knew someone who had been robbed without a weapon and with a weapon, respectively; 74 (45.1 percent) and 62 (37.8 percent) knew someone who had been assaulted without a weapon and with a weapon; 46 (28.0 percent) and 35 (21.3 percent) knew someone who had been raped without a weapon and with a weapon; 118 (71.5 percent) reported knowing someone who had been shot with a gun; 77 (47.2 percent) knew someone who had been knifed ; and 97 (58.8 percent) knew someone who had been murdered (Table 2).

Scores were derived to determine the total number of times subjects had been personally victimized, the total number of crimes they had witnessed, and the total number of people they knew who had been victims. Adolescents reported being victimized a mean of 1.42 times (SD= 3.33), but this ranged between not being victimized to reporting 24 incidents. They had witnessed as many as 50 violent acts, with a mean of 5.32 episodes (SD = 9.35). Further, they reported knowing an average of 11.52 individuals who had been victimized (SD = 15.84, range 0 to 103).

## Discussion

Preliminary findings of this study reveal a high prevalence of violence in the daily lives of inner city teens. Being personally victimized was much less fre-

**Table 1. Adolescents Victimized by Crime and Receiving Related Health Care**

| Crime | Teenagers victimized | | Victims who sought medical care | Victims who sought counseling |
|---|---|---|---|---|
| | % | (no.) | % | % |
| Robbed without a weapon | 9.5 | 16 | 13.3 | 13.3 |
| Robbed with a weapon | 8.1 | 13 | 25.0 | 0.0 |
| Assaulted without a weapon | 16.5 | 27 | 37.0 | 14.8 |
| Assaulted with a weapon | 8.6 | 14 | 38.5 | 23.1 |
| Threatened with rape | 16.0 | 26 | 36.0 | 34.6 |
| Raped without a weapon | 7.4 | 12 | 58.3 | 50.0 |
| Raped with aweapon | 1.2 | 2 | 50.0 | 50.0 |
| Shot with a gun | 2.4 | 4 | 100.0 | 100.0 |
| Knifed | 6.1 | 10 | 60.0 | 10.0 |
| Life threatened | 22.9 | 38 | 12.1 | 21.2 |

quent than either knowing a victim or witnessing a violent crime. The rates for being assaulted and robbed were similar to the incidence reported by Bell et al.[9] Higher rates were noted in our study for being robbed with a weapon and raped. Almost 25 percent of the teenagers were either threatened with or actually raped. Since almost 80 percent of this sample was female, this incidence is most probably higher than the true population rate.

With the exception of being shot, adolescent victims of crime varied in their attainment of health care. For instance, only half the teenagers who had been raped without a weapon sought medical or psychological care, and only 60 percent of those who had been knifed sought medical treatment. This finding suggests that adolescents may not consider health care providers to be resources when they have been victimized.

These youth were aware of considerable violence perpetrated upon others. With the exception of assault, these rates far exceeded those previously reported. To underscore the high rates reported by this sample, over half knew someone who had been murdered, and over 70 percent knew someone who had been shot. Thus, teenagers are not only victims of crime themselves, but also they are to violence through the experiences of their families and peers.

In addition, many inner city teenagers were witnesses of crime. Almost half had witnessed a shooting, and almost 25 percent had seen a knifing and murder.

*Media violence has been associated with increased aggressive and antisocial behavior, yet the deleterious effects of exposure to real life violence in teens is yet to be determined.*

**Table 2. Teenagers Witnessing Violent Activity and Knowing Persons Victimized by Crime**

| Crime | Witnessing violent activity | | Teens who know victims of crime | |
|---|---|---|---|---|
| | % | (no.) | % | (no.) |
| Robbed without a weapon | 25.6 | 41 | 48.8 | 79 |
| Robbed with a weapon | 25.3 | 41 | 52.5 | 85 |
| Assaulted without a weapon | 32.2 | 57 | 45.1 | 74 |
| Assaulted with a weapon | 28.2 | 46 | 37.8 | 62 |
| Raped without a weapon | 8.0 | 13 | 28.0 | 46 |
| Raped with a weapon | 5.5 | 9 | 21.3 | 35 |
| Shot with a gun | 42.3 | 69 | 71.5 | 118 |
| Knifed | 24.8 | 40 | 47.2 | 77 |
| Murdered | 23.5 | 38 | 58.8 | 97 |

Our study highlights the need for further exploration of the social milieu of teenagers. Health care providers must be attuned to signs of physical and sexual abuse. Unexplained cuts, bruises, gashes, as well as unusual discomfort during pelvic exams may warrant questioning about victimization or exposure to violence. Since violence has been associated with depression,[19] suicidal ideation,[20] nervous breakdowns,[21] substance abuse,[22] and juvenile delinquency,[12] early inquiry and detection may avert negative consequences associated with traumatic experiences.

The majority of subjects in this sample were female. To the extent that males are exposed to more violence than females, the rates reported from this study are an underrepresentation of the true prevalence. On the other hand, since rape is more common in females,[2] the 20 percent of males in this sample may have diluted the true incidence of sexual violence in female teens. Further study is needed to address the prevalence of violence in other adolescent populations, the location of criminal activity, and the victim-perpetrator relationship. In addition, risk factors that expose teens to violence need to be identified and corrected.

For both victims and witnesses, the short- and long-term effects of these life events must be delineated. By gaining a more complete understanding of teenagers' exposure to violence, programs can be developed to decrease societal violence and to educate adolescents about safety and judgment. For those teens who have been victimized, support groups and treatment programs must be available.

For the medical community, violence perpetrated against teenagers has significant morbidity and mortality,[2] although compliance to medical regimens may be viewed as unimportant by a teen who has just undergone a life threatening experience.

Findings of this study indicate that the majority of inner city teenagers either have been a victim of violence, know someone who has been victimized, or have witnessed criminal activity. Health professionals need to be cognizant of these rates as they seek to understand the physical social environment of inner city youth. Since teenagers do not always obtain medical or psychological care after they have been exposed to violence, health care providers should routinely inquire about teenagers' experiences.

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# Adolescent Suicide, Homicide, and Unintentional Injuries

*ALAIN JOFFE MD*

**Violent deaths account for over three fourths of the deaths among 15 to 24 year olds. Each year, some 38,000 youths die from accidents, homicides, and suicide. Physicians can play two important roles: as individuals caring for adolescents and as advocates for prevention programs by calling attention to the magnitude of this problem.**

The terrible tragedy of AIDS has focused attention on the number of young lives prematurely brought to a close each year. Yet for adolescents and young adults, it is not disease but rather violence, a form of "social mortality," that accounts for 76 percent of these deaths. Unintentional injuries (accidents), homicides, and suicides represent the three leading causes of death for persons aged 15 to 24 (Figure 1). Malignancies and heart disease rank only fourth and fifth.[1]

Until 1982, adolescents and young adults were the only age group in the United States with a rising death rate. After 1982, the death rate for this population began to decline, but the rate of decline has not been nearly as great as for any other age group, including the elderly and young infants. Each year approximately 38,000 teenagers die from violence-related causes. While at first this problem may seem insurmountable and "incurable," attention to some of the details associated with these deaths suggests opportunities for solutions and perhaps even prevention.

### Unintentional Injuries

Dwarfing all other causes of death is that of accidents, especially motor vehicle accidents. In 1985, almost 14,300 persons aged 15 to 24 died as a result of these accidents. While teenagers constitute only about 22 percent of all drivers, they account for 36 percent of automobile fatalities. Approximately half these deaths are associated with use of alcohol.[2] The National Highway Traffic Safety Administration estimates that 40 percent to 55 percent of fatally injured drivers have a blood alcohol level within the legally intoxicated range.[3] Whether other drugs (such as marijuana) also may contribute to the problem is unclear. There is neither a standardized reporting system for accidents involving other drugs nor a uniformly accepted measure of impairment analagous to the blood alcohol level.

Males are much more likely to be injured than are females, even when statistics are corrected for numbers of miles driven, and both males and females have much higher fatality rates at night.[3] Teenagers are notoriously poor users of seat belts: approximately 88 percent in one study did not do so consistently. Estimates are that seat belt users decrease their risk of death by 60 percent.[4]

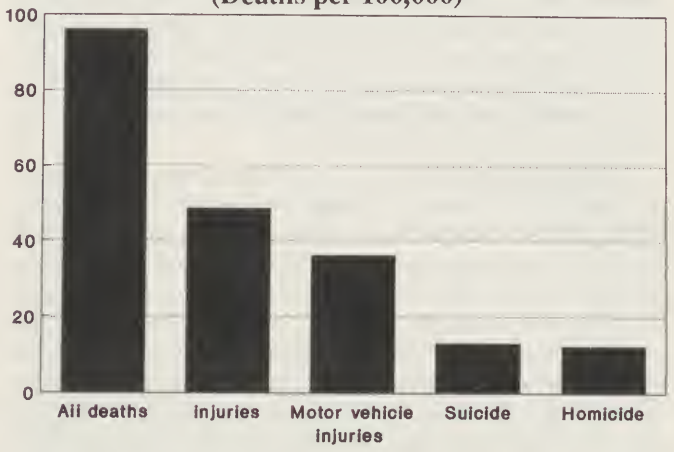
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While not as ubiquitous as automobiles, motorcycles are increasing in popularity, and the percent of teenage deaths attributed to their use also has climbed. Motorcycle deaths account for 1 in 6 to 7 motor vehicle fatalities.[2] The death rate per 100,000 miles driven for motorcycles is six times that for automobiles. Motorcyclists who do not wear helmets have twice the risk for head injuries and three times the risk for fatal injuries as do peers who use helmets. Like motor vehicle accidents, many motorcycle accidents are associated with alcohol use.

Another significant cause of unintentional injury related deaths occurring among adolescents is drowning. In 1984, some 1,353 young people aged 15 to 24 drowned.[5] Forty percent of drowning deaths in Maryland in 1972 were in this age group.[6] As with all other types of injuries males greatly outnumber females. Physicians in Maryland, where water-related recreational activities form so much a part of adolescents' lives, should be especially concerned with these deaths. Drowning incidents usually occur in areas where groups of teenagers congregate unsupervised. The most common sites of drownings are not oceans but rather lakes, rivers, and quarries.[6]

Alcohol plays a significant role in these deaths. The warming effect associated with alcohol may mask fatigue or cold. In the case of power boat deaths, it interferes with judgment and coordination and decreases the reflexes needed for safe operation of the boat. Two-

**Death Rates Among Youths, 15-24 (Deaths per 100,000)**



thirds of boat-related drownings involve capsizing or falling overboard.

**Prevention** Strategies for prevention of these injury related deaths should focus more on decreasing exposure or minimizing the injury rather than on education as a means to changing behavior. While the latter is a goal worth pursuing, current research does not suggest that education alone changes behavior.

For motor vehicle accidents, adoption of nighttime driving curfews and increasing the age of licensure have resulted in reduction of fatal injuries.[3] New Jersey, which licenses drivers at 17, has a fatal crash rate among 16 year olds more than 50 percent lower than in the nearby states of Massachusetts and Connecticut where licensure occurs at 16.5 and 16 respectively.[3]

Mandatory use of seatbelts and helmets also would decrease fatal injuries. Since alcohol contributes so heavily to this mortality, raising the legal drinking age to 21 would reduce deaths; such a result has been noted in states raising the legal purchase age. Community approaches such as Project Graduation, which afford teenagers a safe ride home during periods when heavy drinking is likely to occur also have been shown to be effective.

Driver education classes traditionally have been viewed as a means of teaching teenagers to drive safely. Unfortunately, current statistics do not support this assumption. In reality, these classes encourage young teenagers to get their licenses at an earlier age than they otherwise would, with the attendant increased crash risk for them.

Connecticut eliminated state funding for driver education in 1976. In the ensuing years there was a net reduction in the licensure of 16 and 17 year olds and a reduction in the per capita crash involvement in communities that discontinued the training. There was little change for communities where driver education was maintained.[3] Sixteen-year-old drivers who have taken a driver education course probably do not have lower crash rates than age-matched drivers without such training, although the data are difficult to assess because of the "volunteer effect" related to the kinds of individuals who sign up for driver education.[7]

Physicians should routinely ask their adolescent patients about the use of drugs and alcohol and should highlight the dangerous combination of drinking and driving. Encouraging regular seat belt and motorcycle helmet use should be part of any routine health visit. Parents also should be advised about insisting on use of seat belts and modeling this behavior through their own personal use. They should be urged to clarify that even if a teenager elects to drink, against parental advice, the parent will pick up the teenager regardless of the time of night. Such help also should be offered when their son or daughter is faced with having to ride home with an intoxicated friend or date.

Many of these same principles apply to water safety. Drinking and swimming or boating is dangerous for both parents and young adults. Again parental behavior offers a powerful example for sons and daughters.

## Homicide

Homicide is the leading cause of death for young black men and women. From 1970 to 1982, the homicide rate for these youths decreased by 33.5 percent to 72/100,000 population; however for white teenage males the rate increased from 9.9 to 13.1 per 100,000 in the same period. The overall decline has been greater for blacks ages 20 to 24 than for those 15 to 19. Homicide rates, regardless of race, are twice as high in urban as in rural areas.[8] In 1985, 4,772 persons ages 15 to 24 were victims of homicide (and other legal interventions, that is, killed during police interventions).

Approximately 70 percent of the time, homicides involve use of a gun. Cutting or piercing instruments are responsible for an additional 20 to 25 percent of deaths. Alcohol is involved in a significant proportion of these deaths. Contrary to popular belief, a minority (approximately 15 percent) of homicides occur during criminal events such as robberies or drug trafficking. Sixty to 65 percent occur during or after arguments.

Particularly distressing is that the majority of these homicides occur in the home and are committed by an acquaintance (40 percent) or a family member (8 percent). Strangers are involved in only 25 percent of homicides, and in an additional 25 percent the identity of the attacker remains undetermined.[9] The apparent racial differences in homicide rates disappear or decrease substantially when controlled for socioeconomic status. High population density is a particular risk factor as is the presence of handguns in the home.

**Prevention** Prevention strategies for decreasing homicides have only begun to be elaborated. Hospital data indicate that many more persons are assaulted with sharp objects than with guns, but the death rate from guns is five times that for sharp objects. The evidence thus points to the gun rather than the characteristics of the individuals involved in the homicide as accounting for the high death rate from guns.[10] Hence, decreasing availability of handguns likely will decrease homicide rates and may decrease suicide rates as well. Teaching behaviors that reduce the likelihood of conflict resolution through violence and decrease the acceptability of behaviors that promote violence also may hold promise.

## Suicide

In 1985, approximately 5,121 youths between the ages of 15 and 24 committed suicide, 95 more than in 1984. The number may actually be higher because some suicides go unreported, and some observers feel that an undetermined percent of single-occupant motor vehicle deaths are actually suicides. From 1960 to 1980, the suicide rate increased 140 percent, from 5.2 to 12.3 deaths per 100,000.[11]

The rate for white males increased from 8.6/100,000 in 1960 to a high of 22.2/100,000 in 1977; it then declined slightly but in 1980 was 21.4 (Table 1). Rates for black males increased from 4.1/100,000 in 1960 to 14.0 in 1979 and 12.3 in 1980. For white females, the rate increased from 2.3 to a peak of 5.4 in 1977 and is now 4.6/100,000. Comparable figures for black females are 1.3 in 1960, a high of 3.7 in 1977 and 2.3 in 1980.

Currently, males commit suicide three times more often than do females.[12] Approximately 70 percent of male suicide victims are white, with white males being the only clear race and sex grouping to show a continued upward trend since the late 1970s. There is also a striking geographic distribution to suicides: the western United States consistently has higher suicide rates than do other regions. This difference has narrowed substantially as rates in the nonwestern US have increased faster in the last decade.

The means of suicide also have changed, especially among women. The percent of suicides in this gender group caused by firearms and other explosives has increased from about 30.2 to 38.6 in the last decade. Accordingly, use of poisons (potentially a less lethal method if prompt medical attention can be obtained) has dropped from 36.7 percent to about 27 percent. Males continue to use the highly lethal method of firearms. Currently, use of this method accounts for about 63.1 percent of male suicides, an increase of about 10 percent over the last decade.[13]

A variety of risk factors has been suggested to be associated with suicide.[9,14] These factors include a family history of suicide, serious psychiatric problems (including depression), previous suicide attempt, widowed or divorced marital status, and the presence of firearms in the home Whether exposure to suicide (either through the media or to a friend or schoolmate) increases risk for suicide remains controversial. Two large studies showed a definite increase in the number of teenage suicides in the immediate period after networks aired movies about the topic[15,16] The increase did not appear to be due to precipitation of suicides that would have occurred later. However, other investigators have failed to replicate these findings. Clustering of suicides following an isolated suicide are routinely reported.

Impulsive behavior and substance abuse are common among adolescents and young adults. If the two occur together, the substance use may impair judgment enough so that an impulsive behavior that otherwise might have been avoided or have ended in injury instead results in suicide.

**Prevention** Even though the rate of suicide among young persons has increased, suicides in any one location are still rare enough events (12.8/100,000) that evaluation of prevention programs is difficult. It is imperative, therefore, that on an individual basis, any physician should be alert to the possibility of suicide in any adolescent and especially in those with one or more of the risk factors discussed above. This would require that physicians routinely ask about family history of psychiatric problems and suicide and determine whether an adolescent is using alcohol and/or illicit substances and to what extent.

While media attention might increase suicides, there is no evidence that a physician's asking a youth at risk whether he or she has contemplated suicide will precipitate the act. To the extent that a teenager responds affirmatively and has made any kind of plan for suicide, immediate consultation with a psychiatrist should be arranged. Any teenager who has made a significant gesture should be hospitalized. Some would argue that all teenagers who have made a gesture, regardless of how seemingly insignificant, should be hospitalized. They certainly should not be released from the outpatient department or office without being evaluated by a psychiatrist. Teenagers who have made one gesture continue to be at high risk for another. The likelihood of repetition varies from 10 percent for boys admitted to a psychiatric facility (1 percent for girls with similar circumstances) to 0.1 percent for girls who took an overdose but were not felt sufficiently disturbed to warrant admission.[14]

Because depression is a risk factor for suicide, parents and school personnel also need to be made aware of the

**Table. Suicide Rates for Adolescents, 1960 - 1980 (Rates Per 100,000 People, Ages 15 - 24)**

| Year | Male | | Female | |
|---|---|---|---|---|
| | Black | White | Black | White |
| 1960 | 4.1 | 8.6 | 1.3 | 2.3 |
| 1970 | 10.5 | 13.9 | 3.8 | 4.2 |
| Peak (year) | 14.0 (1979) | 22.4 (1977) | 4.7 (1972) | 5.4 (1977) |
| 1980 | 12.3 | 21.4 | 2.3 | 4.6 |

SOURCE: Maris R. The Adolescent Suicide Problem. Suicide Life Threat Behav 1985;15:91-109

warning signs of depression and that mood changes may **not** simply be a phase of adolescence, especially if persistent.

On a more global scale, elimination of handguns in the home and stricter controls on sales may limit access to the most lethal weapon for committing suicide and may instead increase the potential for rescue when other less lethal means are substituted. Whether suicide hotlines are of benefit remains unclear.

### Summary

Violent deaths - accidents, homicides, suicide - account for 76 percent of deaths among young persons aged 15 to 24. Each year, some 38,000 youths die from these three causes. Efforts to decrease this loss of life will require both individual and community or statewide involvement. Physicians can play important roles on an individual basis in caring for adolescents and, in a broader context, as advocates for prevention programs by calling attention to the magnitude of the problem in his or her community or state.

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# Pharmacologic Issues in Adolescence

*LINDA R. BERGER-ROOCHVARG MD*

**Many pharmacologic issues must be considered when treating adolescents. First, there are changes in body composition that accompany the rapid increases in somatic growth of puberty. These changes in lean body mass and fat mass potentially effect the absorption, metabolism, distribution, and excretion of many drugs. Second, there are numerous drug-drug interactions that occur between prescribed medications and either illicit drugs, over-the-counter preparations or other prescribed medicines. Finally, the health care practitioner must take into account drug-nutrient interactions.**

Changes in body composition that occur as children progress through adolescence, as well as differences between males and females, have relevance to the practitioner who prescribes medicine. Total body water decreases from about 78 percent in the newborn to 60 percent of total body weight by age one year. This percentage remains constant until age ten or the beginning of puberty. During adolescence, the transition occurs to the final figures for total body water of 48.6 percent in adult females and 54.3 percent in adult males. These male-female differences in total body water are not accounted for by differences in extra cellular volume but are due to differences in intracellular water. Intracellular water is equal to 30.9 percent in males and 25.4 percent in females when expressed as a percentage of total body weight in adults.[1] The higher value in the male is due to greater lean body mass. Lean body mass decreases from 80 percent in prepubertal girls to 75 percent of total body weight at maturity. In males, lean body mass increases from 80 percent to 90 percent at maturity.

There are also changes in the proportion of total body fat across adolescence. The percent of total body weight that exists as fat in females increases from 15.7 at the prepubertal Tanner Stage 1 to 18.9, 21.6, and 26.7 percent at Tanner Stages 2, 3, and 4, respectively. In contrast, the percent of body weight that is fat in males decreases from 14 percent in prepubertal Tanner 1 to the adult level of 11 percent by Tanner 2.[2]

These changes in body composition have profound effects on the use of therapeutics, because following absorption, the drug is distributed to its site of action and stored in various tissues. This distribution phase is influenced by the specific properties of the drug (that is, its relative solubility in water or fat) and the amount of water or fat present in the individual who is taking the drug. For example, theophylline has poor lipid solubility and therefore its storage is primarily in the water compartment. Thus, given an adult male and female of equal weight who take the same doses of theophylline, one could anticipate that the female would have higher concentrations of the drug in the vascular compartment. Similarly, comparing the initial response to the same dose of theophylline in a prepubertal girl to that in a postpubertal girl, one would see a higher plasma concentration in the more mature girl, as expected, based on knowledge of differences in body composition. Another example of the importance of knowing the solubility properties of a drug relates to the highly lipid soluble drug marijuana. If equal doses of the drug are smoked by an adult female and male of similar weights, the effects of the marijuana may remain longer in the female.

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## Physiologic Changes

The absorption, metabolism, distribution, and excretion of drugs can change with age. There are many examples with neonates and elderly patients of drug effects that are enhanced or attenuated compared to the effects seen in the adult population. Little is known about changes in gastrointestinal function and absorption across adolescence, but there are some data in the literature to suggest that maturation of that organ system does not occur until adulthood. More important, there are critical changes in the liver during adolescence. For example, the dose (mg/kg/day) of theophylline required to attain a therapeutic serum concentration in a child is about twofold higher than in the adult.[3] Said differently, the half-life of theophylline doubles in the adult when compared to the child. This transition to "adult metabolism" most likely occurs during adolescence and suggests some fundamental changes in drug metabolizing enzymes. Studies of microsomal mixed-function oxidation in broken cell preparations from livers of laboratory animals show that components of the system may vary across the narrow developmental period of puberty. For example, microsomal dimethyaniline oxidase and 7-ethoxycoumarin O-deethylase activity increase.[4,5]

Animal studies have shown that the size and composition of the liver changes through adolescence. For instance, the number of hepatocytes per liver, the average volume of the hepatocytes, the total nitrogen per hepatocyte, and the total microsomal protein increase across this period of adolescence in the rat model.[6-8]

The precise nature of the functional and morphological changes that occur in the human liver during adoles-

cence are unknown, though clearly they affect the rationale behind therapeutic decision making.

### Drug-Drug Interactions

When prescribing a medication, the practitioner must consider three categories of drug interactions: those that occur between the prescribed drug and other prescribed medicines versus over-the-counter (OTC) medicines versus illicit drugs. The list of possible drug-drug interactions is voluminous, but there are several key interactions. Oral contraceptive pills (OCP) are widely used by adolescents and can significantly interact with other prescribed medications. Many anticonvulsants such as phenobarbital and carbamazepine induce hepatic microsomal enzymes and thus increase the metabolism of the estrogen in the OCP potentially making the OCP less effective at the conventionally prescribed dose. Pill failures have been reported when patients have been taking these two drugs.

Ferrous sulfate frequently is prescribed to treat iron deficiency in adolescents. Likewise, tetracycline is used in the treatment of genitourinary infections and acne in this same age group. Tetracycline is chelated by divalent cations and thus the therapeutic response can be diminished if both drugs are consumed concurrently.

The greatest difficulty in anticipating interactions between prescribed medications and OTC medications is identifying which OTC medicines are used by the patient. Most OTC medicines used by adolescents are purchased by other family members and are stored at home. Frequently the teenager does not admit to using these products or the physician does not ask about them. Antacids, which contain aluminum and magnesium hydroxide, will also chelate tetracycline by the same mechanism described above. Laxative and cathartics, used by patients with eating disorders, speed up gastrointestinal transit time and thus may decrease absorption of many drugs such as antibiotics or anticonvulsants. Aspirin, a commonly used analgesic, can have serious interactions with drugs that are bound to albumin in the blood. Since it is the free (unbound) form of a drug that is the active form, anything that displaces a drug from its binding site on albumin will increase the concentration of the free form and potentially make the patient drug toxic. Such is the case with the anticonvulsant phenytoin and aspirin, with the later more highly bound to albumin. A patient who is stable on a given dose of phenytoin can become clinically toxic, even though the serum concentration is "therapeutic," because there is now more unbound phenytoin in the blood.

Finally, there are interactions between prescribed medicines and illicit or street drugs. Once again, it frequently is difficult to anticipate these interactions because knowledge of their use is often hidden. Opiates inhibit peristalsis of the intestines and can affect the absorption of a drug. For example, the pseudomembranous colitis that occasionally occurs with use of the antibiotic clindamycin may be prolonged and worsened by opioids.[9] Cocaine produces an increased heart rate that may potentiate the tachycardia observed with sympathomimetic agents used to treat asthma such as metaproterenol (Alupent). Alcohol may interfere with the therapeutic actions of many drugs. For example, the metabolism of the anticoagulant coumarin is enhanced by ethanol.[9]

### Drug-Nutrient (Dietary) Interactions

Interactions between drugs and the diet depend on whether the patient is in a fed or a fasted state. Variations in therapeutic effects of a constant drug dose in a given patient may sometimes be explained by changes in rates of drug absorption. For example, the following drugs have increased absorption when taken by a patient in the fasted state: ethanol, aspirin, barbiturates, penicillins (other than ampicillin), and theophylline.[10]

Many drug-nutrient interactions are commonly encountered when treating the adolescent. For example, Vitamin C (ascorbic acid) when present in an amount of 200 mg or more increases the absorption of iron by at least 30 percent. Oral contraceptive pills decrease the concentration of Vitamin C in plasma, but the clinical significance remains unclear. Isoniazid increases urinary excretion of Vitamin B6 (pyridoxine). Absorption of griseofulvin is enhanced by a high fat diet. Phenytoin suppresses the ability of Vitamin D to absorb intestinal calcium. In addition phenytoin induces the enzyme that converts 25-OH Vitamin D to 24,25-Vitamin D, which is inactive. Theoretically, this could create a vicious cycle of increased seizures secondary to hypocalcemia, leading to an increased dose of phenytoin, which exacerbates the relative hypocalcemia.

### Summary

Adolescence is a period of rapid growth and many changes in body composition. A decrease in total body water is more pronounced in the female. The percent of body weight that is fat increases in the female while it decreases in the male during adolescence. Lean body mass (expressed as a percentage of total body weight) increases significantly in the male during puberty. Thus, the practitioner must have knowledge of basic pharmacologic principles such as volume of distribution and solubility properties of the drugs prescribed in order to

anticipate changing dosing requirements and drug side effects.

In addition, a careful drug and nutritional history should be obtained on every patient so as to predict possible drug-drug or drug-nutrient interactions. Particularly with adolescents, questions should be directed toward identifying illicit and over-the-counter drugs patients may be using.

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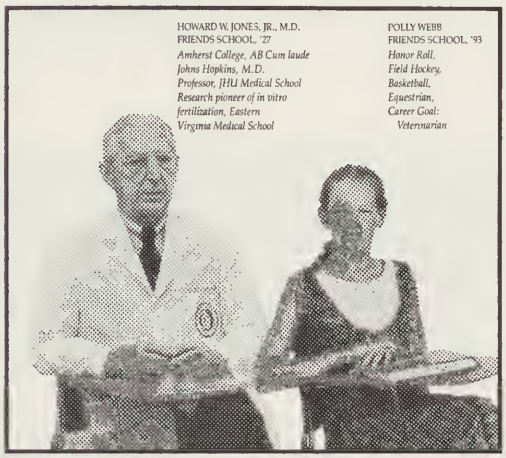
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# Substance Abuse in Adolescents

*HOOVER ADGER, JR., MD*

**The use and abuse of alcohol and other drugs are issues of critical concern for health care providers for youth. Although reported levels of use of alcohol and many illicit drugs have declined from their previous peak levels, current evidence shows that drug abuse among youth remains a major dilemma. Early identification and treatment of substance abuse and dependence can be facilitated by an awareness of risk factors, a routine inquiry as part of the health assessment, and by familiarity with and understanding of the progression of chemical dependency from a stage of no use, to moderate use, to dependence. In addition, knowledge of resources in the community is necessary to link patients to appropriate treatment resources.**

While individuals in all other age groups have had an improvement in overall health status and a prolonged life expectancy, young persons aged 15 to 24 comprise the only group to experience an increase in mortality rate over the past decade, with those aged 15 to 19 having the most acute increase. The major causes of mortality in this group are homicide, suicide, and unintentional injuries. A major proportion of these deaths are associated with alcohol or other drugs.

Today's adolescent lives in a society where alcohol and drug use is prevalent and acceptable. Young persons have incorporated the use of alcohol, marijuana, and tobacco into their socialization to such an extent that those who abstain are in the minority. Recent surveys outlining levels of use in adolescents support the notion that our youth are growing up in a "do drug" society. [1] Their use of alcohol and other drugs can no longer be seen as uncommon or restricted to small subgroups of problem youths. The prevalence patterns cut across gender, ethnic, cultural, and geographic lines. The resultant consequences of such use has become quite evident.[2]

## Epidemiology

Reported use levels for alcohol and many drugs have declined from their peak during the late 1970s and early 1980s. However, evidence shows that the drug abuse problem among youth is still a major dilemma. Since 1975, the National Institute on Drug Abuse has sponsored an annual nationwide survey of approximately 17,000 high school seniors on the use of alcohol, tobacco, and other drugs.[3] In a similar manner, the state of Maryland has conducted a biennial survey of junior and senior high school students in this state since 1973.[4] These data sources provide important, useful information about prevalence patterns and usage trends. However, they probably underestimate the true magnitude of the problem since both include only enrolled students in the survey samples. Reported estimates from Maryland are very similar to the nationwide estimates. Therefore, the figures that follow are drawn from the nationwide sample.

The peak for reported illicit drug use occurred in 1982, however, almost two-thirds of adolescents still report having used an illicit drug before they finish high school, and nearly 40 percent have used an illicit drug other than marijuana. Marijuana is by far the most widely used illicit drug. Six percent of high school seniors reported daily use of marijuana in 1975. By 1978 this figure had increased to 11 percent, but it dropped substantially by 1984 to 5 percent. Fifty-one percent of seniors in 1986 reported using marijuana at some point in their life, with 39 percent reporting some use in the past year, and 23 percent reporting some use in the past month. Four percent reported actively smoking marijuana on a daily basis.

Use of several drugs has shown dramatic decreases from the peak levels in the late 1970s. Included in this group are tranquilizers, barbiturates, methaqualone, LSD, and PCP. The use of stimulants, the most widely used class of illicit drugs outside of marijuana, started to decline in 1983. Despite the declines in the reported levels of use for a number of drugs, however, there now appears to be a stabilization or decrease in the rate of decline suggesting there may be a continuing level of drug use among youth and a trend of continued risk for this group.

Not all drugs have shown declines in reported levels of use. Substantial evidence suggests that cocaine is becoming increasingly more available throughout the United States. With the advent of "crack," a more potent and easily marketable form of the drug, reported use in young persons has taken a major upturn. While only 10 percent of the seniors in 1976 reported having ever used cocaine, by 1985 this figure had risen to 17 percent. This is the highest figure yet reported for this group and indicates the escalating impact of this drug. In addition, while only 10 percent of seniors reported cocaine use in 1976, when questioned on follow-up ten years later, nearly 40 percent of this same group reported having tried cocaine at some time. Hence, a large proportion of adolescents entering young adulthood continue to show evidence of placing themselves at risk for harmful effects of this dangerous drug.

Dr. Adger is Assistant Professor of Pediatrics, The Johns Hopkins University School of Medicine.

## Identification

Nine classes of psychoactive substances are associated with both abuse and dependence: alcohol, amphetamines or similarly acting sympathomimetics, cannabis, cocaine, hallucinogens and volatile inhalants, opioids, phencyclidine (PCP) and similarly acting arylcyclohexamines, and sedative hypnotics.[5] Despite their different physiologic effects, they all share one unique property: the ability to distort the sensory experience and produce pleasure. It is this easily induced pleasure that leads to the induction of behavior change, retardation of psychosocial maturation, and, at times, increasing levels and frequency of use.

As is the case with other chronic and progressive processes, early treatment of chemical dependence leads to better outcomes. The key to early treatment is early recognition and intervention. A prerequisite for early recognition is a familiarity with and understanding of the natural history and progression of adolescent substance abuse from a stage of no use, to moderate use, to immoderate use, to dependency. McDonald and others have described four successive stages of use that help to characterize the progressive nature of substance abuse and chemical dependency.[6] These include (1) experimentation or learning the mood swing, (2) seeking the mood swing, (3) preoccupation with the mood swing, and (4) doing drugs to feel normal (Table).

The use of a psychoactive substance such as beer or marijuana at the experimentation-learning stage generally occurs within the context of initial curiosity and is often in response to peer pressure. Hence, the resultant behaviors are shaped by the experiential learning. First is the knowledge that psychoactive substances result in a welcome or perhaps unwelcome mood swing. In addition, it may be appreciated that these mood swings or feelings can be reliably produced and even controlled to some extent by modulation of the amount or quality or variations of the substance used. Often at this stage, there is little in the way of behavioral changes and an absence of discernable consequences.

Through experience, some adolescents learn to anticipate and welcome the mood swing. For most, these experiences occur within the context of social functions where it is perceived as fun, socially rewarding, and without untoward effects. For some, at this stage, the

### Table. Adolescent Substance Abuse Progression

| Stage | Predisposition | Behavior |
|---|---|---|
| *Stage 1: Experimentation Learning the Mood Swing* | | |
| Infrequent use | Curiosity | Learning the mood |
| Alcohol/marijuana | Peer pressure | Feels good |
| No consequences | Attempt to assume adult role | Positive reinforcement |
| Some fear of use | | Can return to normal |
| Low tolerance | | |
| *Stage 2: Seeking The Mood Swing* | | |
| Increasing frequency | Impress others | Using to get high |
| Use of various drugs | Social function | Pride in amount consumed |
| Minimal defensiveness | Modeling adult behavior | Use to relieve feelings (i.e., anxieties of dating,etc.) |
| Tolerance | | Denial of problem |
| *Stage 3: Preoccupation with the Mood Swing* | | |
| Change in peer group | Using to get loaded, not just high | Begins to violate values and rules |
| Activities revolve around use | | Use before and during school |
| Maintaining steady supply | | Use despite consequences |
| Possible dealing | | Trouble with school |
| Few or no straight friends | | Overdoses, "bad trips, blackouts" |
| Frequent consequences | | Promises to cut down or attempts to quit |
| | | Protection of supply, hides use from peers |
| | | Deterioration in physical condition |
| *Stage 4: Using to Feel Normal* | | |
| Continued use despite adverse outcomes | Use to feel normal | Daily use |
| Inability to stop | | Failure to meet expectations |
| Loss of control | | Loss of control |
| Compulsion | | Paranoia |
| | | Suicide gestures, self-hate |
| | | Physical deterioration (poor eating and sleeping habits) |

euphoric feelings gained through the use of various substances seem to help the adolescent cope with stress by relieving feelings of anxiety or perhaps by providing a desired change in social or peer-group status. At this point there may be a change in peer group, new friends, and the beginning of deterioration in school and other life areas as substance use escalates.

Progression to the next stage involves a movement from anticipation to preoccupation. Drug use at this stage takes on a different meaning as the motivations and increasing substance use assume more of a primary role in the life of the individual. Often problems with family, school, or the law become evident. Polydrug use becomes more frequent, and friends who do not use drugs become scarce.

The final stage, dependence, is characterized by loss of control, compulsion, and evidence of dysfunction. The behavior of the chemically dependent adolescent shows a development of primary relationships with mood-altering drugs, and those values, habits, and relationships that had been primary appear to no longer exist.

## Risk Factors

Both genetics and environment play important roles in the risk profile of an individual. A family history of alcoholism is an important risk factor: children of alcoholics are four to five times more likely to develop alcohol dependence than are other children.[7] Recent evidence indicates there may be biologically measurable differences in such children that may be related to the metabolism of and tolerance to alcohol in addition to the susceptibility to alcohol dependence.[8] The further elucidation of these findings may in the future have applications to youth and risk counseling.

Individuals who have been identified as particularly at risk for development of alcohol/drug abuse include not only children from families where such problems are present but also adolescents who experience significant problems in behavior (such as aggressiveness and rebellious deviancy), cognition (such as learning disabilities and attention deficit disorders), psychologic well-being (such as depression, isolation, and low self-esteem), and familial functioning (such as neglect, abuse, loss, and lack of close relationships).[9]

Substance abuse should be included in the primary differential diagnosis whenever behavioral, familial, psychosocial, or related medical problems occur. As part of routine health examinations, all adolescents should be questioned about the use of cigarettes, alcohol, and other drugs. There also should be an assessment of risk via review of risk factors and behaviors with adolescents and their parents.

## Treatment

Although the actual treatment of adolescents with chemical dependence is beyond the scope of most primary care clinicians, all practitioners should be able to perform an initial assessment of an adolescent's use of drugs and to determine indications for further assessment and intervention. The primary goals of evaluation are to determine if the use of mood-altering chemicals is associated with identifiable consequences and if such use is causing behavioral impairment.[10] A general assessment of psychosocial functioning is an important part of the evaluation since it provides a basis for determining whether behavioral dysfunction exists. Information should be gathered specifically about family relationships, peer relationships, school performance and attendance, recreational and leisure activities, employment, vocational aspirations, frequency of conflicts with parents, and legal difficulties.[11,12] Use patterns of peers and self-perceptions of the adolescent regarding his/her own use and whether it is a problem may provide additional useful information. Information gathered from the evaluation should help determine whether substance abuse is a cause of behavioral dysfunction and the degree of patient involvement as well as whether there is need for further assessment or indications for treatment.

A variety of treatment alternatives are available for the chemically dependent adolescent including short-term inpatient treatment, residential care, and outpatient care that spans the spectrum of traditional office-based care to intensive and structured day programs.[13] Most treatment programs share beliefs that treatment begins with the interruption of use, requires continued abstinence from drugs, and establishes for the adolescent the development of a drug-free lifestyle as a goal. Because of the wide variety of settings and number of different approaches to the treatment of adolescents, it is important for the clinician to be aware of community resources and to become familiar with the personnel and philosophies of the agencies that render services.[14] Armed with this information, the physician will be better able to assume a responsible role in intervention and better able to assist the patient and family in the search for appropriate treatment.

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**Melvin A. Steinberg**

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**Medical and Chirurgical Faculty of the State of Maryland**

# Semiannual Session House of Delegates

# 325th Meeting

**Saturday, September 24, 1988**
**Minutes: House of Delegates**
**Faculty Building, 1211 Cathedral Street, Baltimore, MD 21201**

The 325th meeting of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 2:25 p.m. on Saturday, September 24, 1988 at the Faculty Building, Baltimore, Maryland, the President, Michael R. Dobridge MD, and Secretary, Harold B. Bob MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council member:

**Anne Arundel County**
*William A. Cassidy
Leoncio A. Ceccarelli
Thomas C. Cullis
Michael J. La Penta
*Hilary T. O'Herlihy

**Baltimore City**
Aristides C. Alevizatos
Timothy D. Baker
Donald M. Barrick
Joseph I. Berman
Gaylord L. Clark, Jr.
*Augusto R. De Leon
*Willarda V. Edwards
*Albert Folgueras
Frank A. Giargiana, Jr.
Rafael C. Haciski
John H. Hirschfeld
James M. Hitzrot, II
*Gerald A. Hofkin
Thomas E. Hunt
Murray A. Kalish
*John B. MacGibbon
Donald W. Mintzer
*Albert Nahum
Hiroski Nakazawa
William F. Renner
Bernard R. Shochet
Gardner W. Smith
*David W. Solomon
Edward L. Suarez-Murias
J. Andrew Sumner
*Alan J. Sweatman
Richard B. Williams
Jack M. Zimmerman

**Baltimore County**
Thomas E. Allen (C)
Marianne Benker
Albert Blumberg
Louis C. Breschi
John W. Buckley
Esther Edery
A. Hamid Ghiladi
*Deusdedit Jolbitado
Bernard S. Kleiman
Paul G. Koukoulas
John M. Krager
Margaret L. Sherrard
*J. Carlton Wich

**Calvert County**
David W. Fricke

**Carroll County**
Arthur L. Rudo

**Cecil County**
Henry J. Farkas

**Dorchester County**
Lewis M. Burdette
Paul A. Stagg

**Harford County**
Ben E. Oteyza

**Kent County**
Harry R. Ross

**Montgomery County**
Carol L. Bender
Ralph E. Longway
Herman C. Magazini
Margaret T. Snow

**Prince George's County**
Willie C. Blair
*Myron I. Murdock
David Robb

**Talbot County**
Gregg Rhodes
**Washington County**
Edward W. Ditto, II
**Wicomico County**
Alex Azar
**Worcester County**
Federico Arthes (C)
**Resident Component**
Marcel Salive

**Student Component**
William E. Venanzi

**Council**
Albert M. Antlitz
Raymond M. Atkins
James E. Bell
Harold B. Bob
Benjamin Del Carmen
Donald H. Dembo
Michael R. Dobridge
Frederick J. Hatem
John H. Hebb
Leon E. Kassel
Henry P. Laughlin
Reynaldo Lee-Llacer
George S. Malouf
Leslie R. Miles, Jr.
John H. Mulholland
J. David Nagel
Gerard S. O'Connor
Gary L. Rosenberg
Aubrey C. Smoot
Joseph Snyder
Jose M. Yosuico

**Past President**
Arthur T. Keefe, Jr.

Also present were members of the Faculty Staff.

### Invocation

Leslie R. Miles MD, Chairman of the Committee on Medicine and Religion, delivered the invocation.

In recognition of Med-Chi's accomplishments in the Medicine and Music Program, the national anthem was played as it sounded in the early 1800s.

Invited guests included Delegate Tony Fulton and Delegate Donna Felling of the Maryland legislature,and Alan Rifkin, former aide to Governor Schaefer.

The President made certain announcements, advising of various rules for conduct of House business.

### Minutes Approved

The minutes of the meeting of the House of Delegates held on April 27 and April 29, 1988, having been distributed to all members and corrected and approved by the Executive Committee, were presented to the House of Delegates. The House approved the minutes as corrected by the Executive Committee under Special Rule 1.

### Certificate of Appreciation

Dr. Henry P. Laughlin, Grand Marshal of the 1988 Fourth of July parade held in Washington, DC presented Dr. Dobridge with a certificate in appreciation for providing medical services to an injured party during the parade.

### Media Awards

The President and Dr. William Cassidy, Chairman, Public Relations Committee, presented awards for the third Annual Media Awards Program (which included a plaque and a $1,000 cash donation to the medical charity of the recipient's choice) to the following:

Daily Newspaper Category: Gerri Kobren of the *Baltimore Sun* for her article entitled, "Hitting the Bottle," a report on the devastating effects of alcohol addiction. (Cash donation to Mothers Against Drunk Drivers.)

Magazine and Newspapers Category: Hollis Paschen of the *Columbia Flier* for her entry, "When A Woman's Bones Betray Her," a portrait of the disfiguring realities of Osteoporosis. (The Family Life Center will receive her cash award.)

Radio and Television Category: Andy Barth and Bill Fink of WMAR-TV for their series titled, "The Courage to Heal," an account of life at the Baltimore Burn Center. (The Baltimore Regional Burn Center Foundation to receive their cash award.)

### Maryland Medical Journal Awards

The President presented awards to the following winners of the second annual *Maryland Medical Journal* Best Article award:

William A. Baumgartner MD (primary author)
for the article, "Heart Transplantation: The Johns Hopkins Experience."

Pradeep Garg MD and David A. Blass MD
for their article, "Rocky Mountain Spotted Fever Manifested by Cerebritis and Pneumonitis."

### Emeritus Membership

Upon motion of the Secretary, Harold B. Bob MD the following members were elected to Emeritus Membership in the Faculty, each having received the recommendation of their component societies and the Council:

**Allegany County**
Martin M.Rothstein MD, Frostburg

**Baltimore City**
Thomas B. Connor MD, Baltimore
Sze-Jui Liu MD, Baltimore

**Baltimore County**
Thomas M. Holcomb MD, Timonium
Keith A. Manley MD, Lutherville
Lawrence F. Misanik MD, Baltimore
Geary L. Stonesifer, Jr., MD, Baltimore

**Carroll County**
Richard Y. Dalrymple MD, Westminister

**Frederick County**
Richard L. Fruth MD, Frederick

**Harford County**
Mary V. Barstow MD, Bel Air
Barry J. Plunkett MD, Aberdeen

**Montgomery County**
James R. Coleman MD, Wheaton
Jean Feys MD, Silver Spring
Vincent L. O'Donnell MD, Bethesda
Leonard T. Peterson MD, Bethesda
Nicholas G. Pistolas MD, Silver Spring
Norman H. Rubenstein MD, Silver Spring
Teresa S. Spindel MD, Rockville
Francis J. Troendle MD, Rockville
Yilmaz Yamaner MD, Potomac

**Prince George's County**
Carl J. Houmann MD, Riverdale
Bruno Kolega MD, Camp Springs

**Wicomico County**
Walter D. DeVault MD, Salisbury
Leonid V. Maldve MD, Salisbury
Raymond M. Yow MD, Salisbury

### Council Chairman's Report

Dr. Lee-Llacer, Chairman of the Council, presented a summary of actions taken on various Council resolutions passed in 1988. He also reported on the following issues:

Medicaid ER/OPD Diversion of Services Plan
Resource Based Relative Value Scale
Operation PreCare
Medical Waste Emergency Regulations
Establishment of Women in Medicine Ad Hoc Task Force
3-Part Prescription Proposal

**Mandated Medicare Assignment - Means Test**

The issue of mandated Medicare assignment and the question of support or nonsupport of a "means test" was discussed and the following motion, after amendment, was adopted by the required 2/3 vote:

> That the Delegates poll the members in their component societies in cooperation with Med Chi on the issue of Mandated Medicare Assignment and the acceptance or nonacceptance of a "means test," and further that a special meeting of the House of Delegates be held in November at a date to be announced, for the purpose of assuming a Med Chi position relative to Mandated Medicare Assignment and a means test.

**Treasurer's Report**

Jose M. Yosuico MD, Faculty Treasurer, read the Certificate of O'Dea and Labrador, CPAs as to the accuracy of the Faculty's books and records for the 1987 calendar year, and an opportunity was given for questions. The House, by unanimous consent, approved the auditor's certification.

**1987 - 1988 Committee Reports**

The following 1987-1988 Committee reports, having been distributed in writing to all members for information, an opportunity was afforded to raise questions or make comments.

**Report of the Delegates to the American Medical Association –**
Albert M. Antlitz MD, Roland T. Smoot MD, Donald T. Lewers MD, George S. Malouf MD, Charles F. O'Donnell MD, Michael R. Dobridge MD (Interim Meeting, December 6-9, 1987)

**Committee on AIDS-**
J.D. Drinkard MD

**Committee on Alcoholism and Chemical Dependency-**
N. Joseph Gagliardi MD, Chairman

**American Medical Association Education and Research Foundation (AMA-ERF)-**
Elizabeth A. Linhardt, State Chairman

**Auxiliary-**
Mrs. Ching Barretto, President

**Computers in Medicine Committee-**
H.G. Oster MD, Chairman

**Committee on Continuing Medical Education Review-**
Eugene P. Libre MD, Chairman

**Committee on Drugs-**
Donald M. Pachuta MD, Chairman

**Committee on Emergency Medical Services-**
Peter M. Fahrney MD, Chairman

**Committee on Emotional Health-**
Gary W. Nyman MD, Chairman

**Executive Director -**
Angelo Troisi, FACHE

**Finance Committee-**
Jose M. Yosuico MD, Chairman, Treasurer

**Finney Fund Committee**

**Committee on Hospital Medical Staffs-**
Victor R. Hrehorovich MD, Chairman

**Legislative Committee-**
Israel H. Weiner MD, Co-Chairman;
Leonard Lichtenfeld MD, Co-Chairman

**Liaison Committee with Department of Health and Mental Hygiene -**
Karl M. Green MD, Chairman

**Liaison Committee with Third Party Carrier-**
Aristides C. Alevizatos MD, Chairman

**Library and History Committee-**
Nancy T. Nichols MD, Chairman

**Long Term Care and Geriatrics Committee-**
George Taler MD, Chairman

**Maryland Medical Journal -**
James G. Zimmerly MD, Editor
Victor R. Hrehorovich MD, Associate Editor

**Med-Chi Insurance Fund-**
W. Kenneth Mansfield MD, Chairman

**Medicine and Religion Committee-**
Leslie R. Miles, Jr. MD, Chairman

**Medicolegal Committee -**
Lawrence D. Pinkner MD, Chairman

**Occupational Health Committee -**
Michael K. Spodak MD, Chairman

**Peer Review Committee-**
Emidio A. Bianco MD, Chairman

**Physician/Patient Relations Committee-**
Lois E. Wehren MD, Chairman

**Committee on Physician Rehabilitation-**
Edward J. Kitlowski MD, Chairman

**Committee on Preventive Medicine and Public Health**
Anneslies S. Zachary MD, Chairman

**Committee on Professional Ethics-**
Louis C. Breschi MD, Chairman

**PRO Monitoring Committee-**
John A. Singer MD, Chairman

**Public Relations Committee-**
James E. Bell MD, Chairman

**Committee on Scientific Activity-**
John M. Krager MD, Chairman

**Committee on Small Area Practice Variations-**
Peter E. Dans MD, Chairman

**Committee on Specialist Identification-**
Joseph I. Berman MD, Chairman

**Committee on Young Physicians-**
Susan W. Owens MD, Chairman

**Treasurer**, Jose M. Yosuico MD

**Music in Medicine**

Dr. Harold B. Bob, Secretary, reported that the Faculty had been designated as the repository for literature on medical problems of performing musicians, and a slide show was presented to the House.

**Maryland Foundation for Health Care Elections**

The Secretary read the following list of nominations submitted for election to the Board of Directors of the Maryland Foundation for Health Care:

**Baltimore City District**
Joseph H. Hooper MD, GS, Baltimore City (1991)
Stephen M. Busky MD, U, Baltimore City (1991)
Allan D. Jensen MD, OPH, Baltimore City (1991)
Albert Nahum MD, IM, Baltimore City (1991)
**Baltimore County District**
A.H. Ghiladi MD, IM/PUD, Baltimore County (1991)
**Montgomery County District**
Martin Eichler MD, GS, Montgomery County (1991)
John P. Nasou MD, IM, Montgomery County (1991)
**Southern District**
W. Bradley King, Jr. MD, PTH, Howard County (1989)
Sergio Alvarez MD, GS, Anne Arundel County (1991)
**Western District**
Charles C. Spencer MD, IM
Washington County (1990)

The floor was opened for nominations. Dr. Henry H. Canton, Anne Arundel County, was nominated for the 3-year term in the Southern District. Nominations were declared closed by general consent.

There being no contest in Baltimore City, Baltimore County, Montgomery County, and Western Districts, the candidates were declared elected by acclamation.

The President appointed Margaret Snow MD and Joseph Snyder MD as Tellers. The election in the Southern District was conducted by ballot, following which the President declared Dr. Sergio Alvarez elected to the 3-year position in the Southern District, by majority vote.

**Bylaws Committee Report**

Dr. Azar, Chairman of the Bylaws Committee, moved adoption of the following bylaw amendments which, by unanimous consent, were consdidered together and adopted by the required 2/3 vote of the House:

Amend Article XI (Committees), Section 28, following the words "A Committee on..." by striking out the words "Preventive Medicine and" and inserting "Public Health."

Amend Article VI (House of Delegates), Section 5, Subsection (b), following the words "One member of the" and before the words "elected by that body" by striking out the words "Board of Medical Examiners" and inserting the words "Board of Physician Quality Assurance."

Amend Article IX (Board of Medical Examiners), following the words "Article IX" by striking out the words "Board of Medical Examiners" and inserting the words "Board of Physician Quality Assurance."

Amend Article IX, Section 1, following the words "There shall be a" by striking out the words "Board of Medical Examiners" and inserting the words "Board of Physician Quality Assurance," and following the words "composed of " and before the words "active members" by striking out the word "eight" and inserting the word "fifteen."

Amend Article IX, Section 2, by substituting for it the following:

> Section 2. Replacement members of the Board of Physician Quality Assurance to be seated each year shall be nominated at the first meeting of the annual session of the House of Delegates and at least twice the number of vacancies to be filled for that specific year shall be voted upon as the list of nominees to be submitted to the Governor for appointment to the Board. Vacancies on the Board caused by death, resignation, or removal from office, shall be filled in accordance with the current bylaws.

Amend Article XI, Section 21 (Nominating Committee), following the words "elected committees, the" by striking out the words "Board of Medical Examiners" and inserting the words "Board of Physician Quality Assurance."

Amend Article XIII (Grievances) by striking it out in its entirety.

Amend Article XIV (Disciplinary Procedures), Section 13, following the words "revoked by an order of the" by striking out the words "Commission on Medical Discipline" and inserting the words "Board of Physician Quality Assurance"; following the words "as contained in the" and before the word "order" by striking the word "Commission's" and inserting the words "Board of Physician Quality Assurance"; and following the words "at the time the" and before the words "order shall become final" by striking the word "Commission's" and inserting the words "Board of Physician Quality Assurance."

**Reference Committee Report**

Dr. Aubrey Smoot, Chairman of the Reference Committee, moved adoption of the following resolution 1S/88, which after debate and amendment, was adopted as follows:

**Resolution 1S/88 - Gun Control Legislation Adopted as Amended**

Whereas, The Prince George's County Medical Socicty and the Medical and Chirurgical Faculty testified before the Maryland General Assembly in favor of Gun Control Legislation as far back as 1983;

Whereas, The American Medical Association's House of Delegates adopted a Council on Scientific Affairs report recommending that the AMA encourage and endorse the development and presentation of safety education programs that will engender more responsible use and storage of firearms and, among other things, recommending that the Consumer Product Safety Commission be granted the authority to regulate the manufacture and distribution of firearms and ammunition;

Whereas, The Center for Disease Control has indicated repeatedly the increasing incidents of homicide and suicide among young Americans primarily with firearms and has recommended "developing strategies to reduce firearms associated injuries";

Whereas, Studies have shown that firearms kept in the home are more likely to cause accidental death;

Whereas, The physicians of Maryland daily treat the maimed, the dying, and the bereaved victims of handgun violence; and

Whereas, The physicians of Maryland are particularly responsible to bring the need for continued control of the distribution of handguns to the attention of the citizens of our state; therefore, be it

*Resolved,* That this House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland gives its full support to the Gun Control Law; and further

*Resolved,* That in relation to the upcoming referendum on the Gun Control Law in November 1988, the Medical and Chirurgical Faculty advises all citizens to vote to endorse the law which bans "Saturday night specials" and undetectable handguns and to oppose any effort to repeal the existing law by referendum or any other means; and further will provide appropriate funding toward this effort as determined by the Executive Committee.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 2S/88, which was adopted without dissent:

**Resolution 2S/88 - HHS "Bounty System" - Adopted**

Whereas, The "bounty system" in the Department of Health and Human Services (HHS), Office of Inspector General (OIG), rewards high level employees with financial bonuses based on the number of sanctions imposed and profit recovered through federal Professional Review Organizations (PRO), a program which is neither logical nor addresses sanctions based on poor quality of care, but rather on the number of sanctions imposed;

Whereas, The federal court in California has recently declined to rule on the legality of the bounty hunting system, because the physician challenging the sanctions was completely exonerated by an administrative law judge;

Whereas, This makes it very difficult to obtain judicial repudiation of the bounty system;

Whereas, An American Medical Association resolution, introduced by the California delegation, resulted in only a letter to the Office of Inspector General, and not in any tangible change in the OIG's policy; and

Whereas, It is imperative that this issue be put before the Medical and Chirurgical Faculty of the State of Maryland as soon as possible in order to halt this unjust system; therefore be it

*Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland take all appropriate steps, including legislation, if necessary, to abolish the policy of the Inspector General under which high level employees receive favorable performance rewards based on the number of the PRO-recommended sanctions they impose and/or the amount of dollar penalties they recover.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 3S/88, which was adopted unanimously by the House:

**Resolution 3S/88 - Non-U.S. Medical Schools Adopted**

Whereas, The Medical and Chirurgical Faculty of the State of Maryland has always maintained that students and physicians are to be evaluated on the basis of their qualifications, skills and character; and

Whereas, There are movements within our socioeconomic system to evaluate physicians by the site of their education rather than its quality; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland oppose discrimination in any form or manner based on sex, age, ethnic background, religion, country of origin, or location of medical school; and

*Resolved,* That Med-Chi strive to remove such discrimination in residency programs, examination eligibility requirements, medical staff and academic appointment, and professional society memberships; and be it further

*Resolved,* That Med-Chi join with medical and specialty societies to remove discrimination in licensure requirements based upon the geographic location of the medical school.

Dr. Aubrey Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 4S/88, which was adopted without dissent:

**Resolution 4S/88 - Hospital Medical Staffs - Adopted**

Whereas, Physicians who currently serve as presidents of hospital medical staffs, heads of medical and surgical departments, and on hospital peer review or quality review committees run the risk of being sued for the conduct of other physicians on the hospital staff; and

Whereas, Hospital boards of directors run the same risk but are insured by hospitals against such suits in the form of officers and directors liability insurance; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland notify the Maryland Hospital Association, and all hospital medical staffs and hospital administrators, that every physician who serves as a hospital medical staff president, head of hospital medical or surgical department, member of a hospital peer review or quality review committee, or acts in any hospital administrative capacity, absent malice, should be held harmless in the same manner and in the same monetary amount as is the hospital's board of directors, and that the Hospital Bylaws, liability insurance policies, etc. be so amended to include such provision.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following Resolution 5S/88, which after debate and amendment, received the required 2/3 vote and was adopted by the House:

**Resolution 5S/88 - Nursing Shortage**
**Adopted as Amended**

Whereas, There is currently a shortage of of nursing personnel to take care of hospitalized and other patients;

Whereas, The demand for nursing services for the care of hospitalized patients continues to increase;

Whereas, Hospitals, HMOs, nursing homes, insurance companies, PROs, and others compete with each other to attract nurses, which impacts adversely on the cost of health care;

Whereas, By this shortage of qualified nursing personnel, the quality, availability, and quantity of medical care will be adversely affected; and

Whereas, The investment in tuition to become trained as a baccalaureate degree nurse is high compared to the traditional earning expectations of a nurse; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland will continue to study the current and future needs for nurses in Maryland; and be it further

*Resolved,* That Med-Chi work with Maryland legislators and all appropriate nursing organizations, to include schools of nursing, the Maryland Board of Nursing, etc. to develop a plan to insure the nursing care needs of all patients are appropriately met.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 6S/88, which was adopted unanimously by the House:

**Resolution 6S/88 - Medical Denials - Adopted**

Whereas, Medicare denials are being received by a growing number of physicians stating that treatment was "medically unnecessary" when the care provided was obviously appropriate and in the best interest of the patient;

Whereas, The intent of the Medicare laws and the regulations implementing them are being distorted in the interest of cost containment to deny quality medical care in some cases and to imply that quality medical care is "medically unnecessary" in other cases;

Whereas, There appears to be great inconsistency in the standards being applied and the process of review in that denials are issued without proper peer review;

Whereas, The letters of denial may be the cause of litigation against the physician and may cause mistrust by the patient; and

Whereas, Although the American Medical Association has successfully modified the legislatively mandated denials by insuring that a claim development letter is sent first, the letter is still triggered by computer screens and not physician review; therefore, be it

Resolved, That the Medical and Chirurgical Faculty of the State of Maryland join with the American Medical Association to continue to seek appropriate legislative relief from the "medically unnecessary" provisions of section 9332 (c) of the Omnibus Budget Reconciliation Act of 1986 (OBRA), including the repeal of this provision;

*Resolved,* That until such time as repeal of this provision is achieved, Med-Chi in consonance with the AMA shall continue to press the Health Care Financing Administration (HCFA) and Medicare Part B carriers to make further changes in the implementation of this authority to correct problems being experienced, including:

a. Urging HCFA and the carriers to make the denial criteria, parameters of treatment and medical review policies available to the physician community;
b. Obtaining assurance that carrier medical review policies are developed with practicing physicians advice;
c. Continue to work to assure that physician are notified by the carrier prior to a "medically unnecessary" notification being sent to a patient;
d. Urging carriers to facilitate the expeditious handling of physician requests for reconsiderations and appeals of "medically unnecessary" denials;
e. Working to assure that patient notifications are worded in such a way so as not to put into question the attending physicians' professional judgment or the quality of care received and that the services denied be clearly identified (by more than just procedure code) in such notices, and that they be referred to as "not covered by Medicare" as opposed to "medically unnecessary"; and
f. Opposing required wording in the patient waiver form (advance exculpatory notice) that suggests that the physician is about to provide medically unnecessary services to his or her patient; and

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland in cooperation with the AMA continue to gather data and information regarding the nature and extent of problems experienced by physicians arising from the implementation of this authority, with particular attention to any evidence suggesting that nonassigned patient Medicare claims are subjected to greater scrutiny (and more likely denial) than assigned claims; and be it further

*Resolved,* That should neither legislative nor administrative relief be forthcoming, the Medical and Chirurgical Faculty of the State of Maryland join with the AMA exploring potential judicial relief.

Dr. Smoot, on behalf of the Reference Committee, moved adopted of the following resolution 7S/88, which was adopted unanimously by the House:

**Resolution 7S/88 - Quality Assurance - Adopted**

Whereas, The Joint Commission on Accreditation of Healthcare Organization's leadership has recognized the need for adequate financial support for quality assurance; and

Whereas, The medical staff is generally authorized to review and monitor the quality of care within hospitals; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland support the principle that hospitals adequately budget support for quality assurance activities; and be it further

*Resolved,* That Med-Chi encourage medical staffs to develop appropriate reporting channels for quality assurance activities.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of Resolution 8S/88. After a lengthy debate, the House voted to table the Resolution, which reads as follows:

**Resolution 8S/88 - Medical Witness Testimony Tabled**

Whereas, Section 9.07 of Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association states that,

> The medical witness must not become an advocate or a partisan in the legal proceedings. The medical witness should be adequately prepared and should testify honestly and truthfully. It is unethical for a physician to accept compensation that is contingent upon the outcome of litigation.

Whereas, Providing medical experts to assist in the child preparation of malpractice litigation and as expert witnesses has evolved into a highly profitable competitive business; and

Whereas, Resolution 52 (a - 77) called on the AMA to "condemn physicians who give false or misleading testimony or misrepresent their qualifications," "urge courts to refuse testimony of those physicians who do not have clear cut qualifications as recognized by their peers," and "urge state and medical societies to take action before the medical licensure board when physicians testify without sufficient medical knowledge or testify falsely," therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland adopts the concept that providing expert medical testimony is part of the professional practice of medicine by a physician and should be considered within the review of professional peer review and the Maryland Board of Physician Quality Assurance; and

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland encourage its members to file formal complaints with the Maryland Board of Physician Quality Assurance regarding individual physicians expert testimony which they believe to be of dubious nature; and be it further

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland will develop and include procedures in its peer review system for the evaluation of expert medical testimony by impartial reviewers, with reports sent to the Maryland Board of Physician Quality Assurance if said testimony deviates substantially from accepted medical opinion.

Dr. Smoot, on behalf of the Reference Committee, moved adoption on the following resolution 9S/88, which was adopted unanimously by the House:

**Resolution 9S/88 - Medicare - Adopted**

Whereas, Current Health Care Financing Administration (HCFA) policy does not interpret humane, caring or socioeconomic factors to satisfy medical necessity criteria for Medicare reimbursement;

Whereas, It is cruel, negligent, and against accepted medical standards to discharge fragile elderly patients before they have recovered sufficiently to return safely to their home environment; and

Whereas, It is also cruel, negligent and against accepted medical standards to refuse hospital admissions to elderly patients scheduled for certain diagnostic or therapeutic procedures; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland petition its Congressional Representatives, the Health Care Financing Administration (HCFA) and the Maryland Cost Review Commission to include a Medicare hospital reimbursement category for humane social admissions and continued hospital stays, at a rate appropriate for the reduced patient care need.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 10S/88, which was adopted unanimously by the House:

**Resolution 10S/88 - HHS Use of Term "Provider" Adopted**

Whereas, Physician ("Doctors") fees and costs, when referred to by the Department of Health and Human Services and Medicare, include practitioners other than physician MDs; therefore be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland urge the Maryland Congressional representatives to demand that the Department of Health and Human Services and the Health Care Financing Administration, at all times, distinguish between medical doctors and all other health care providers and discontinue the use of the generic and all inclusive term "provider" when reporting or referring to costs of physician services.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 11S/88, which was adopted unanimously by the House:

**Resolution 11S/88 - Aids Project - Adopted**

Whereas, There have been approximately 57,000 cases of AIDS reported in the United States, along with an estimated 1.5 to 3 million people infected with the AIDS virus who are asymptomatic;

Whereas, The latest studies have shown over 70 percent of HIV positive individuals will develop fatal symptoms of AIDS within seven years and the rest will probably succumb within a few short years;

Whereas, There is no known cure for this fatal disease at this time; and

Whereas, Preventive measures have been found to be effective in reduction of the incidence of this disease, therefore, be it

*Resolved,* That the Medical and Chirurgical Faculty of the State of Maryland assist the various educational systems in Maryland in the development of appropriate and intensive educational programs designed to educate all citizens, and especially school children regarding the dangers of this infectious disease and its transmission; and

*Resolved,* That Med-Chi and its component societies advocate appropriate funding from state and local governments for the dissemination of AIDS public education; and be it further

*Resolved,* That Med-Chi and its component societies support any legislation that would enhance education toward prevention of this AIDS crisis.

Dr. Smoot, on behalf of the Reference Committee, moved adoption of the following resolution 12S/88. Following discussion during which comments were made that under the present leadership the Faculty was currently working toward the intent of the Resolution, the House voted to table the Resolution, which reads as follows:

**Resolution 12S - House of Delegates - Tabled**

Whereas, The Council of the Medical and Chirurgical Faculty of the State of Maryland recommends policy and procedures for the Med-Chi House of Delegates;

Whereas, It may be perceived by some members of the House of Delegates that the majority of the effort of the House of Delegates is ceremonial in nature;

Whereas, Increased involvement and commitment in policy and procedural affairs on the part of the House of Delegates is required if the problems adversely affecting the profession of medicine are to be addressed;

Whereas, Greater and greater outside forces are impinging upon the practice of the profession of medicine, thereby requiring further debate and involvement by all members of the profession; therefore, be it

*Resolved,* That the House of Delegates of the Medical and Chirurgical Faculty of Maryland direct the Council to develop a format for the House of Delegates meetings that would enhance the identification of critical issues; and be further

*Resolved,* That the new format be designed such as to assure that appropriate debate is encouraged and enhanced in the House of Delegates of Med-Chi.

**Review of Policy Resolutions**

The Secretary reported Resolutions 4A/78, unnumbered SA-78, and 1S/78, with a staff review required after the expiration of ten years. Resolutions 4A/78 and unnumbered SA-78 were reaffirmed and will remain in effect without further action, as follows:

**Resolution 4A/78 - Reaffirmed**

*Resolved,* That the General Meetings, as provided in Article V of the Bylaws, be broadly publicized and the attendance of all officers and members encouraged in order to emphasize its function as an open forum for discussion of the purposes of the Faculty, the direction it is taking, any worthwhile modifications of its program, and general informal observations regarding the work of the organization.

**Resolution SA/78 - Reaffirmed**

*Resolved,* That the Medical and Chirurgical Faculty endorse a policy of "no smoking" at all business and professional meetings of the Faculty.

**Resolution 1S/78 - Deleted**

A motion to delete Resolution 1S/78 was unanimously adopted. Resolution 1S/78 reads as follows:

*Resolved,* That the Medical and Chirurgical Faculty goes on record as supporting research into the efficacy of heroin for evidence of therapeutic advantage in the treatment of retractable pain in terminally ill patients; and be it also

*Resolved,* That federal agencies be contacted and urged to expedite research activities in this area.

**Policy Review Motion Adopted**

The following motion by Dr. J. David Nagel was adopted unanimously by the House:

That the Bylaws Committee review policies more frequently than the present ten-year review originally established in 1983.

**Motion to Amend Special Rules of House Postponed**

A motion was introduced by Dr. Joseph Snyder to amend the Special Rules of the House to provide for nonmembers to speak from the floor of the House on the simple majority, as opposed to the present requirement of a 3/4 vote. After debate, the House voted to postpone action on this motion until the 1989 annual meeting.

The meeting was adjourned at 5:15 p.m. by unanimous consent.

*HAROLD B. BOB* MD
Secretary

# Delegation to the AMA House of Delegates
# Annual Meeting, June 26-30, 1988

*Mr. President and Members of the House of Delegates:*

Your delegation attended the annual session of the AMA House of Delegates in Chicago and reports the following summary of the major issues considered at the meeting:

## Registered Care Technologists (RCTs)

The Board of Trustees submitted a report proposing a pilot program to create a Registered Care Technologist in response to the severe shortage of nurses.

The RCT is described as a bedside care giver who executes physicians' orders at the direction of the head nurse at the bedside. The RCT maintains patient comfort in hospitals, long- term care facilities and (with advanced certification) in intensive care units. An RCT's role is task-oriented, designed to focus on medical orders at the bedside with special skills in modern technology. They would serve patients, functioning much the same way as corpsmen would in military hospitals.

The RCT report received much attention from the national media and is, of course, a controversial proposal in the nursing profession. Several nursing organizations sent representatives to the meeting, and they were permitted to speak at the reference committee hearing.

The House amended the report to require certification and registration rather than licensure of the RCT and referred the matter to the Board for action.

## Medicaid Reform

The House approved a major report calling for significant reform in the Medicaid program that would:

- create basic national eligibility and benefits standards
- eliminate existing categorical requirements
- create adequate payment schedules

In a related action the House referred a resolution for action that calls on the AMA to establish a high-priority task force to address the problem of indigent health care. The resolution suggests that the task force use a broad approach, which may include a coalition with other organizations and solicitation of grants and voluntary contributions.

## Drug Abuse in the United States: Toward a New Drug Policy

The Board of Trustees submitted a major initiative on drug abuse in the United States. Calling drug abuse the common element in America's most pressing social problems of crime, disease, poverty, and corruption, the AMA Board issued a detailed report describing the scope of the illicit drug abuse problem. The report states AMA's commitment to reducing the personal and public health risks of drug abuse.

The report contained recommendations that call for a redirection away from interdiction of illegal supply and a new focus on curbing demand through education and treatment.

Stating that the federal effort against drug abuse could be better coordinated, a key recommendation urges the President of the United States to appoint a high-ranking official of the Executive Branch to assume responsibility of coordinating the national effort against drug abuse.

Other recommendations for improving the nation's response to the drug problem include:

- a recognition by the federal government that reducing the demand for, as opposed to the supply of, drugs is a realistic approach to the problem and that the federal government should take the lead by instituting programs aimed at the demand side of the drug problem; that is,
  1. expanded treatment and rehabilitation programs
  2. a coordinated educational program that complements local educational efforts
  3. the expansion of community based prevention programs for youth at high risk
- stimulating private initiatives to curb drug abuse by, among other things, providing a framework for private drug testing that promotes employer prerogatives while protecting employees' rights.
- a call on the nation to make a long-term commit ment to research and data collection so that programs can be devised based on a reasonable understanding of the scope, nature, and diversity of drug abuse.
- a proposal that the focus of the national campaign against drug abuse be broadened to include abuse of alcohol and tobacco
- a recommendation that all public officials and organizations participating in the debate on drug policy help shift the emphasis away from simplistic resolutions such as "a declaration of a war on drugs" and toward recognition of the complexity of the drug abuse problem.

## AIDS

The House considered several reports and resolutions giving a status report on this serious public health issue.

Essentially the House reaffirmed AMA policy established at the 1987 Annual Meeting on such issues as:

- AIDS education
- adequate public funding
- mandatory and voluntary testing
- access to HIV testing
- vigorous enforcement of existing antidiscrimination satutes

The House approved new policy calling for:

- a second national seroprevalence study to determine the rate of spread of the AIDS epidemic.
- states to give serious consideration to implementing a contact-tracing program with adequate safeguards to protect confidentiality of seropositive persons and their contacts, and for the counseling of parties involved.
- a recommendation that in the United States

where safe, alternative nutrition is widely available, HIV seropositive women should not breast feed. HIV testing of all human milk bank donors should be mandatory, and milk from such donors not be used for human consumption.

Mandatory testing of prison inmates remains a controversial issue. As further data becomes available, the House anticipates another report on this subject at the 1988 Interim Meeting.

The House approved a report on the financing of care for AIDS patients that reiterates earlier conclusions that private insurance and existing public programs, coupled with state risk pools, provide the best approach for financing care for AIDS patients.

The House approved a resolution asking the FDA to continue to expedite evaluations of available drugs used in the treatment of AIDS.

The availability of disability insurance for physicians with infectious diseases was the subject of four resolutions, and the delegates expressed great concern and a sense of urgency over this issue. The House called for a comprehensive study and a report back at the 1988 Interim Meeting.

### Medicare Maximum Allowable Actual Charge (MAAC)

A number of resolutions were considered regarding the problems physicians are having with Medicare's MAAC provisions. This was a major issue at this meeting.

The House adopted policy that calls on the AMA to:

- seek repeal of the MAAC provision
- support federal legislation that would rectify Medicare contractual inequities with physicians and patients
- establish principle of freedom of contract in the practice of medicine
- continue to evaluate the selective discriminatory nature of MAAC and challenge these provisions as well as laws and regulations forcing assignment for laboratory and diagnostic procedures
- continue to oppose differential treatment of "participating" and "nonparticipating" physicians under Medicare including:
  1. the "Notification of Charges" statement required by Medicare for nonparticipating physicians
  2. statements on the explanation of benefits
  3. the use of participating physician directories work to allow physicians to treat Medicare patients outside of regulatory constraints that threaten the physician patient relationship.

### Medicare Claim Denial

Physicians nationwide are angry with the Medicare requirement of "medically unnecessary" denial forms. This provision of the Omnibus Budget Reconciliation Act of 1986 prompted ten separate resolutions that were considered by the delegates.

The delegates approved policy calling on the AMA to:

- seek appropriate legislative relief including repeal of this provision
- continue to press HCFA and the Medicare Part B carriers to make further changes in the implementation of this authority to correct problems being experienced, including:
  1. urging HCFA and the carriers to make denial criteria, parameters of treatment, and medical review policies available to the physician community.
  2. obtaining assurances that carrier medical review policies are developed with practicing physician advice.
  3. continuing to work to assure that physicians are notified by the carrier prior to a "medically unnecessary" notification being sent to the patient.
  4. urging carriers to facilitate the expeditious handling of physician requests for reconsiderations and appeals of "medically unnecessary" denials.
  5. working to assure that patient notifications are worded in such a way so as not to put into question the attending physician's professional judgment or the quality of care received.
  6. assure that the services denied be clearly identified (by more than just procedure code) in such notices, and that they be referred to as "not covered by Medicare" as opposed to "medically unnecessary."
  7. opposing required wording in the patient waiver form (advance exculpatory notice) that suggests that the physician is about to provide medically unnecessary services to his or her patient.
  8. seeking to change HCFA policy on a national level, so that all Part B Medicare denials are reviewed by a physician and surgeon.
- continue to gather data regarding the nature and extent of physicians arising from the implementation of this authority
- explore judicial relief if legislative or administrative relief is not forthcoming

### Peer Review after Patrick v. Burget

The House adopted a comprehensive report that addresses the legal liability concerns for physicians participating in peer review raised by the Supreme Court decision in *Patrick* v. *Burget*. The report concluded that:

- legal risks are minimal provided that peer review is conducted in good faith with proper procedures
- application of treble damages is inappropriate and chilling
- physicians with an adverse peer review decision should have redress
- additional protection from antitrust exposure be assured or procedures to minimize these risks be developed

The House commended the Board of Trustees and the Committee on Medicolegal Problems for this prompt and comprehensive analysis and urged wide distribution of the report.

### AMA Finances and Dues

The House commended the Board of Trustees, its Finance Committee, and the Executive Vice President for their careful oversight and prudent management of the Association's finances.

In fiscal year 1987, operating *revenues* increased by 7.0 percent over 1986 for a total of $150,648,000.

Total 1987 operating *expenses* amounted to $144,608,000, representing an increase of 8.5 percent over the previous year.

A modest dues increase of $25 (to $400) in 1989 was approved by the House.

1. medical students and resident physician dues remained unchanged
2. other dues categories were increased proportionately
3. a 10 percent rebate on AMA dues for members of unified societies would continue in 1989.

In an effort to increase AMA membership through unification, the Board reported the following enhancements to AMA unification incentives to state medical societies, subject to annual review by the Board and five-year sunset provision;

- The following provisions have been established for currently nonunified states that implement unification, provided that they meet certain criteria established by the Board:

| Year of Unification Provision | (%) of State and County Dues Revenue |
|---|---|
| Year 1 | Loss |
| Year 2 | 100 |
| Year 3 | 100 |
| Year 4 | 80 |
| Year 5 | 60 |
| Year 6 | 40 |
| | & beyond |

Normal incentive award earned plus 5 percent premium.

- States that have been unified for at least five consecutive years will receive an annual grant from the AMA to assist their efforts to recruit and retain AMA members.
- Membership Incentive Program revenue goals will be adjusted for all unified states to reflect the degree of difficulty they encounter in further increasing their AMA membership.

In other actions the House:

1. Adopted a report that offers a set of principles on long-term care (LTC) financing, including:
   - assurance of access to needed services
   - protection of personal autonomy and responsibility in selecting LTC service providers
   - promotion of family caregiving
   - prevention of impoverishment in the face of extended or catastrophic LTC costs
   - timely, coordinated coverage of services in the least restrictive setting appropriate to the individual's need
2. Adopted a policy that asks the AMA to seek to introduce legislation that would provide a federal tax deduction and/or additional appropriate incentives for individuals rendering home care to family members with a long-term illness.
3. Adopted a policy calling on the AMA to sponsor or support legislation that would require employers currently required to offer participation in HMOs to provide employees with a choice of health insurance types whereby employees have free choice of physicians and health care facilities.
4. Adopted a policy that asks the AMA to seek to have the federal government fund an independent study to examine and assess the present impact on the quality of medical care from mandated utilization review, medical necessity standards, methods of reimbursement, denial of hospital admissions for illness, and surgical and invasive procedures.
5. Adopted an amended resolution calling on the AMA to conduct or cause to occur a study to evaluate the impact of quality of care when the method of payment affects the quality of medical care and access to care. The House of Delegates would receive an annual progress report.
6. Adopted a report recommending that a full evaluation of the resource-based relative value scale for physician services be completed before implementation decisions are made and that a reasonable transition period be included before any adoption of a Medicare fee schedule. National specialty societies will be convened by the AMA Board before testifying at the Physician Payment Review Commission hearings on the RVS in October.
7. Adopted a resolution in opposition to the inaccurate and/or misleading use of the terms "usual, customary, or reasonable" by insurance carriers in their communications with patients.
8. Adopted a report of the Special Task Force on Professional Liability that provides substantial background on professional liability activities, including state tort reform actions. The report also detailed the activities of the AMA/Specialty Society Medical Liability Project and the status of the model developed to create a fault-based administrative procedure to resolve medical liability claims.
9. Referred to the Board for action a resolution that called the AMA to take a series of actions related to tobacco product marketing activities abroad.
10. Adopted a policy in support of the Department of Defense by publicizing its need for physicians in active duty military service and in the reserve components and guard and that the AMA encourage the active support and participation of physicians in active duty military service and in the reserves and guard.
11. Adopted as amended a report outlining four principles that recognize the value of office-based laboratory testing and the need to assure the quality of that testing.
12. Adopted as amended a resolution calling on the AMA to support the elimination of the HHS proposed requirement that laboratories servicing Medicare patients be operated by physicians or by scientists with doctoral degrees.
13. Adopted a policy strongly objecting to the introduction of smokeless cigarettes.
14. Adopted a resolution encouraging all airlines to adopt a no smoking policy on all domestic flights.
15. Adopted a policy calling on the AMA to develop an action plan and set of recommendations for working with other organizations and agencies to identify ways to improve science education in the nation and to increase interest in science and education on the part of the nation's youth.

## Conclusion

AMA House meetings provide a unique educational opportunity and we encourage you to attend and par-

# PHYSICIANS

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ticipate. Any member of the Association may present testimony at the Reference Committee hearings and, of course, corridor discussions on the issues provide ample opportunities to get your views across.

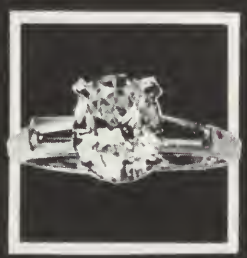
If you can't come to the meeting you can still be represented through your delegate. Let your delegation know your opinions. You also can prepare a resolution and request that it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

**Delegates:**
*ALBERT M. ANTLITZ* MD, Baltimore, Chairman
*CHARLES F. O'DONNELL* MD, Towson
*MICHAEL R. DOBRIDGE* MD, Silver Spring
*ROLAND T. SMOOT* MD, Baltimore
*DONALD T. LEWERS* MD, Easton
*GEORGE S. MALOUF* MD, Hyattsville

**Alternate Delegates:**
*JOSEPH SNYDER* MD, Silver Spring
*HILDA I. HOULIHAN* MD, Salisbury
*JOHN H. HEBB* MD, Baltimore
*HENRY N. WAGNER, JR.* MD, Baltimore
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**191st Annual Meeting**
**Medical and Chirurgical Faculty of Maryland**



## Congressman Tom McMillen

**Keynote Speaker**

Tom McMillen, Congressman for Maryland's 4th district, well-known former University of Maryland athlete and National Basketball Association player, will be Med Chi's keynote speaker at the Plenary Session, Wednesday, April 12, 1989 at 2 p.m.

**Don't miss it!**

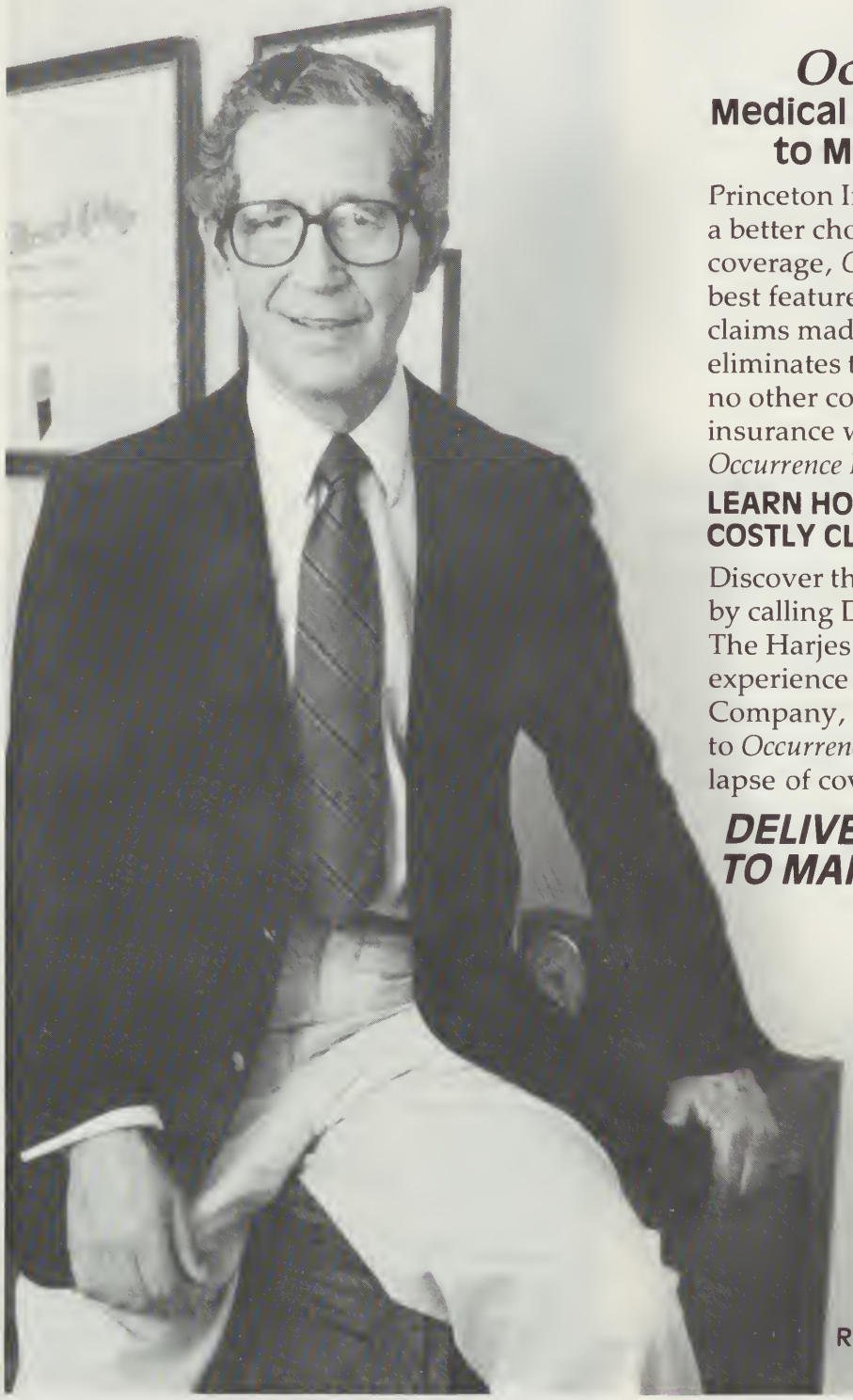
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## Wendell Muncie Prize Award - 1989

The Maryland Association of Private Practicing Psychiatrists and The Maryland Psychiatric Society again announce a contest to grant a $500 award to the author who submits the best paper pertaining to a psychiatric subject. Two honorable mention awards are offered; the First Honorable Mention will receive a $100 prize.

Eligible physicians are those who reside or practice within the bounds of the Maryland District Branch of the American Psychiatric Association (that is, all of the State of Maryland except Prince George's and Montgomery Counties) who, as of the deadline for submission of the paper, are no more than 15 years beyond graduation from medical school, have completed at least one year of an approved psychiatric residency, and are active in the profession of psychiatry.

The subject may be clinical, research, theoretical, or other aspects of any topic pertaining to psychiatry or allied fields. The paper must be unpublished, and there are no restrictions on length.

The prize will be awarded solely by discretion of the judges. The winner will be asked to personally read his/her paper at the joint meeting of the two societies scheduled for April 27, 1989. First honorable mention winner will be asked to present his/her paper to the Maryland Association of Private Practicing Psychiatrists at a Fall 1989 meeting.

Manuscripts must be received by **February 1, 1989**. Mail them to: Craig M. Martin MD, Committee Chairperson, The Wendell Muncie Annual Prize Award, 1101 St. Paul St. - Ste. 305, Baltimore, MD 21202.

**ad·dict** \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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# Members in the News

**Gordon Murdoch Smith MD**, Frederick, retired on September 3 from the Practice of Family and Geriatric Medicine at the King Health Center of the US Soldiers' and Airmen's Home in Washington, DC, with which he has been associated since 1978.

From 1948 until 1978, Dr. Smith was associated with Dr. John Fawcett in a Family Medicine practice in the Barnesville, Poolesville, and Darnestown area of western Montgomery County. He was on the attending staff of Suburban Hospital and the courtesy staff of Frederick Hospital. A 1936 graduate from Western High School (DC) and George Washington University Medical School in 1943, he served in the US Army in World War II.

• • • • •

The following Maryland physicians were recently named among the 136 new Fellows of the American College Radiology (ACR) during ceremonies at the ACR annual meeting in Cincinnati: **Christopher M. Harvey MD**, Lutherville; **Lawrence E. Holder MD**, Baltimore; **Louis P. Kirschner MD**, Potomac; **Dennis W. White MD**, Queenstown; and **Albert M. Zelna MD**, Potomac. Fellowships in the College are awarded for significant scientific or clinical research in the field of radiology, or significant contributions to its literature. Criteria for selection also include performance of outstanding service as a teacher of radiology, service to organized medicine, and an outstanding reputation among colleagues and local community as a result of long-term superior service.


**Statement of Ownership, Management, and Circulation**

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Total 7,558; average 7,576.

# Highlights: Executive Committee and Council Actions

**Executive Committee - Thursday, August 18, 1988**

**Minutes** The Executive Committee minutes of July 21, 1988, were approved as distributed.

**Resolutions** Resolutions sponsored by the AMA Delegation to be presented to the House of Delegates semiannual session were reviewed by the Executive Committee, following which a motion was adopted that the resolutions be submitted to the Council with a recommendation for approval and submission to the House.

**AIDS Education** The Committee approved a request from Dr. Edward F. Brandt of the University of Maryland at Baltimore for Med-Chi's cooperation in working with the University in relation to a recent grant received from the federal government designating the University as an AIDS Regional Education and Training Center. A letter indicating Med-Chi's interest has been sent to Dr. Brandt.

**Three-Part Prescription Proposal** The Committee on Drugs reported that it had discussed the three-part prescription proposal of the DHMH at its meeting on August 16, 1988. Their recommendation was that the proposal to develop such a three-part prescription control mechanism was not necessary and therefore was not to be supported.

The Executive Committee accepted the recommendation and noted the committee's additional intent to seek more information and to pursue the matter further. Also, since the matter was referred to the Legislative Committee, the Executive Committee thought it important to await that committee's recommendations.

**Physicians Rehabilitation** Norbert Picha reported on the current status of the Physician Rehabilitation Loan Program. It was noted that loan repayments are being sought and that the loan application form has been changed to reflect more businesslike repayments and is being reviewed by our legal counsel.

**Emergency Care Pre-Paid Health Plans** The Committee was advised of the recommendation of Med Chi's Ad Hoc Task Force on Emergency Medical Services that a joint liaison committee be established with the HMO Association of Maryland to address problems encountered in providing emergency medical care to members of pre-paid health plans. A meeting of the HMO association's executive committee is planned for August 24, at which time this issue will be discussed.

Dr. Atkins suggested that the development of a "Managed Care Liaison Committee" designed to address problems between practicing physicians and various managed care programs might be a positive consideration. He further stated that perhaps the chairman of the current Liaison Committee with Third-Party Carriers should be contacted to ascertain his thoughts on expanding the current purpose of his committee to include these problems with HMOS so that all managed care liaison could be accomplished in the one committee.

**Membership Recruitment** Staff reported that the concept of a generic membership application form is acceptable to component medical societies and that a form documenting necessary information required for membership will be developed. The Faculty has the capability to produce verified credentialing information on request. Efforts are being made to review and to streamline the membership processing system at the component society level. A membership recruitment incentive program for physicians was summarized and will be placed before the Council for action at its next meeting on September 24.

**Global Fees - Cataract Surgery** Dr. Lee-Llacer informed the Executive Committee that Maryland Blue Cross and Blue Shield has accepted Med Chi's position on the global fee issue and has reimbursed the physician group that had initially complained regarding Blue Cross/Blue Shield's payment practices.

**Drug Policy - Baltimore City Mayor's** The Executive Committee was presented with a report on Mayor Schmoke's Drug Policy Workshop attended by Dr. Nelson Goodman, Chairman of Med Chi's Committee on Drugs, which was accepted as information.

**Registered Care Technologists (RCT)** Dr. Lee-Llacer reviewed the AMA's Registered Care Technologist Program, which the Executive Committee accepted for information. The AMA's program is designed to study the feasibility of establishing such a bedside care technician and to develop a demonstration project to determine its potential. He further stated that the AMA's proposal is one for study and not one for implementation.

**Professional Liability - Statute of Limitations Extension** The Committee received for information the news releases of the Court of Appeals action to extend the three-year limit for bringing a wrongful death case alleging medical malpractice. The plaintiff argued that she could not meet the three-year deadline because of the defendant physician's fraud. The case has been remanded to a Circuit Court jury to determine whether the representations of the defendant physician about the patient's care were recklessly false. An analysis of the case will be prepared by in-house counsel.

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## Errata

In the August 1988 issue of *MMJ*, page 654 under "Nominations," the names of the Delegates to the AMA were listed incorrrectly. Please note the following correct list of newly elected delegates:

*Delegates to the AMA*
John H. Hebb MD, Baltimore
(January 1, 1989 - December 31, 1991)
Michael R. Dobridge MD, Silver Spring
(January 1, 1989 - December 31, 1991)

*Alternate Delegates to the AMA*
Joseph Snyder MD, Silver Spring
(January 1, 1989 - December 31, 1991)
Alex Azar MD, Salisbury
(January 1, 1989 - December 31, 1991)

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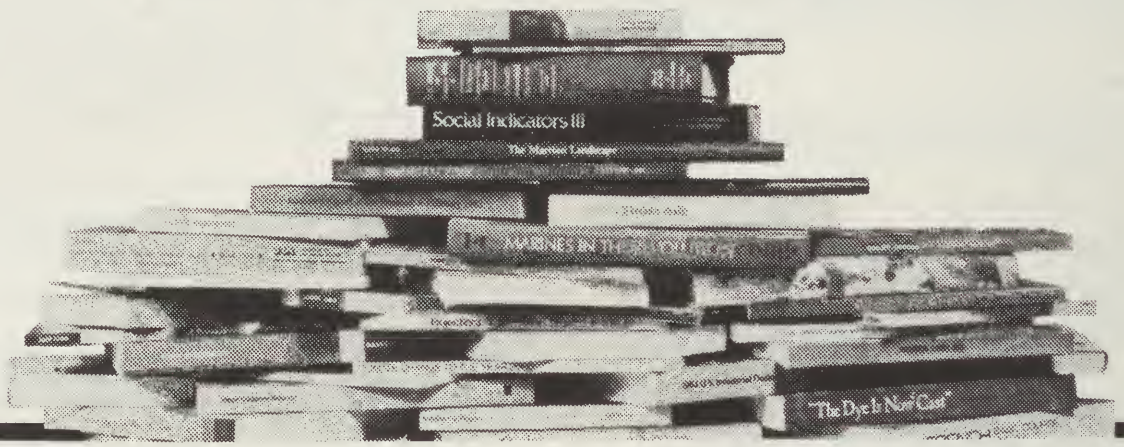
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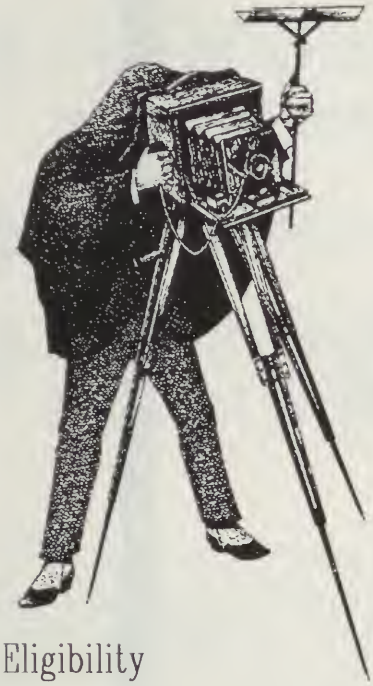
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# Ninth Annual Med Chi Photo Contest

**Enter Early-- Dealine For Entries: March 15, 1989**
**Two Categories: Black & White Or Color**
**Open to Med Chi Members And Auxiliary Members**
**All Photographs On Display At The**
**Turf Valley Country Club**
**During The 1989 Annual Meeting**
**First And Second Prizes Awarded In Each Category**

## Eligibility

All members of the Faculty and members of the Auxiliary to the Medical and Chirurgical Faculty may enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

## Contest Rules

1. Photographs may be submitted in two categories-- Black and White or Color.

2. Limit: three entries per person

3. Entries must have name address, and telephone number attached to the back of each photograph.

4. Prints only, no smaller than 8x10 or larger than 11x14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.

5. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on March 15, 1988.

6. Entries must be matted or dry mounted. No framed photographs will be accepted.

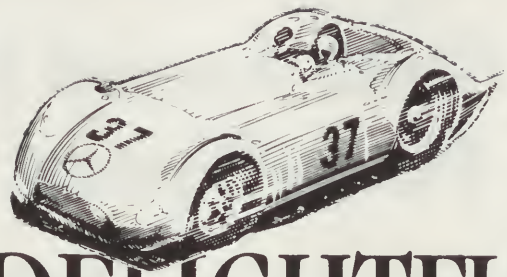
7. Photographs entered in the contest will be on display at the Annual Meeting in April of 1989.

8. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty, April 12 thru 14, 1989.

9. Photographs will NOT be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual Meeting on Friday, April 14, at noon or at the Faculty Building thereafter.

10. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.

11. Prizes will be awarded to the FIRST AND SECOND place winners. Additional information about the prizes will be published in the Journal.




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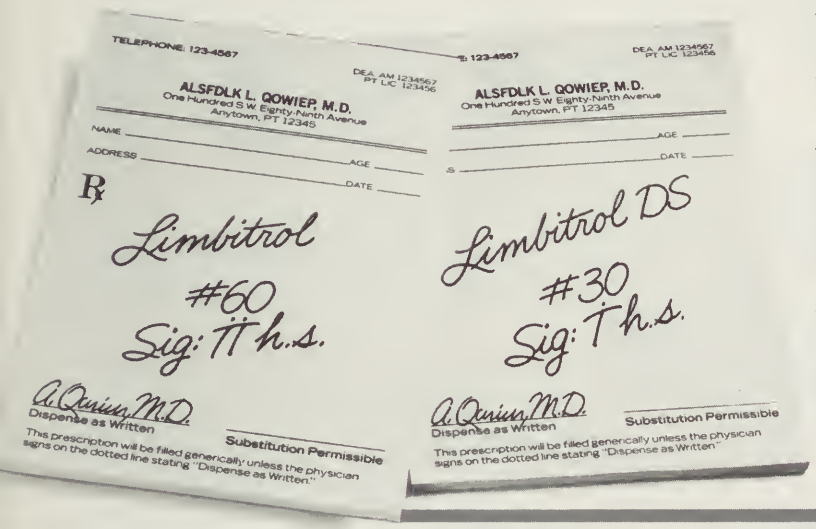
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**References:** 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

**Limbitrol®Ⓒ IV**
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**Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

**Warnings:** Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

**Precautions:** Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

**Adverse Reactions:** Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Drug Abuse and Dependence:** Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

**Overdosage:** Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**How Supplied:** *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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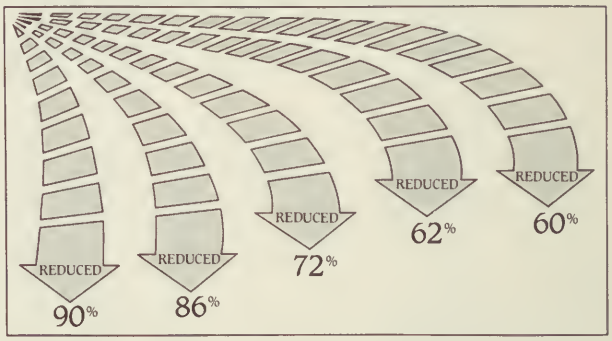
# See Improvement In The First Week...[1]

## And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*




*Patients often presented with more than one somatic symptom.

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